

REVISION OF THE AUSTRALIAN HESPERIADÆ.

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[Read June 3, 1902.]

HESPERIADÆ.

Eyes glabrous. Club of antennæ large, strong, basal joint with long hair tuft. Anterior legs fully developed; posterior tibiæ usually with middle spurs. Forewings with all veins separate. Hindwings with 5 generally absent.

A large family, generally distributed, but absent from New Zealand. Most abundant within the tropics.

Many arrangements have been proposed by different writers on this group, but we have adopted the system of numbering the veins, which for brevity and clearness appears to us ample for the study and recognition of the different genera. The position of vein 5 of the forewing in relation with 6 and 4 proves a valuable generic character. The shape of the club, and the absence or presence of the stigma of the male, are also useful guides, and although the latter varies much in shape and size it is remarkably constant in individual species. The pattern of the wings and general coloring of the upper side are very similar in coloration and appearance, especially so in the Indo-Malayan forms, and it is highly probable that some of our species will prove to be synonymic with Oriental forms, but long series and further study are required to give anything approaching finality to the subject. The best and most important markings for identification will be found on the under surface of the hindwings, and the shape of the hindwings has been characterised where of any value. The markings of the female are generally similar to the opposite sex, but more strongly developed. The descriptions of larvæ and pupæ are given where known, and it will be noticed that a large proportion of the species feed on species of *Cladium*, and are usually full fed in October and November. We have enumerated eighty species, all of which are distinct. We have fully a dozen others, but not in a fit condition for description. The reputed Australian species are enumerated at the end of the paper.

We estimate that over 100 species will be found to occur in Australia. The group resolves itself into fourteen genera, *Telesto*, Bd., and *Trapezites*, Hüb., being the most predominant and widely distributed. Perhaps it is as well to mention that the drawing up of the generic characters and identifications has been made by Mr. Meyrick. The descriptive and other work in connection with the paper has been performed by the junior author. The specific descriptions may appear unnecessarily lengthened, but the abortive works of many of the older authors, which for the purpose of study are useless, disposes of this objection. We may state that we shall at all times be pleased to identify any specimens entrusted to us, and wish to thank the many kind friends for assistance, especially Messrs. Illidge, Waterhouse, Turner, Tepper, and Lyell.

Those genera asterisked (*) are confined to the Australian region.

In conclusion perhaps it is well to mention *Euschemon Rafflesia*, Mac. This insect is undoubtedly *not* referable to the Hesperiadæ. It has a large and well developed frenulum, which is invariably absent in the *Hesperiadæ* and in all other Butterflies. Superficially it recalls the *Agaristidæ*. In neuration, however, it nearly approaches the *Hesperiadæ*. It stands by itself as a separate family, and must, we think, be regarded as related to the ancestral form of the *Hesperiadæ*, intermediate between them and the *Thyrididæ*.

TABULATION OF GENERA.

| | |
|-----------------------------------------------------------------------------------|----------------------|
| 1. Hindwings with five developed... .. | 3 |
| Hindwings with 5 obsolete | 5 |
| 2. Palpi ascending, terminal joint long, slightly swollen near apex, porrected | 4 |
| Palpi sub-porrect, terminal joint moderate | 8 <i>Exometeca</i> . |
| 3. Hindwings with 3 and 4 closely approximated | 14 <i>Hasora</i> . |
| Hindwings with 3 and 4 remote | 13 <i>Badamia</i> . |
| 4. Forewings with 5 parallel to 4 and 6, slightly nearer 6 at base | 6 |
| Forewings with 5 rather approximated to 4 | 11 |
| 5. Posterior tibiae without middle spurs... | 7 |
| Posterior with all spurs | 8 |
| 6. Palpi ascending | 7 <i>Phœnicops</i> . |
| Palpi sub-porrect | 5 <i>Mesodina</i> . |

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|--------------------------------------------------------------------------|--------|----|--------------------|
| 7. Forewings in male with costal fold | ... | 3 | <i>Netrocoryne</i> |
| Forewings in male without fold | ... | 9 | |
| 8. Forewings in male with stigma | ... | 6 | <i>Telesto.</i> |
| Forewings in male without stigma | ... | 10 | |
| 9. Palpi porrected | | 4 | <i>Tagiades.</i> |
| Palpi obliquely ascending | | 7 | <i>Trapezites.</i> |
| 10. Terminal joint of palpi short | | 11 | |
| Terminal joint of palpi rather long | | 9 | <i>Apauptus.</i> |
| 11. Terminal joint of palpi porrected | | 12 | <i>Notocrypta.</i> |
| Terminal joint of palpi erect | | 13 | |
| 12. Forewings with 3 in male approximated | | | |
| to 4 | | 11 | <i>Erynnis.</i> |
| Forewings with 3 in male remote from 4 | | 10 | <i>Telicota.</i> |
| 13. Forewings in male with costal fold, posterior tibiæ with all spurs | | 3 | |
| Forewings in male with costal fold, posterior tibiæ without middle spurs | | 1 | <i>Casyapa.</i> |

1. CASYAPA, Kirby.

Club of antennæ moderate, gradually thickened, tapering to a fine point, bent, not hooked. Hind tibiæ densely fringed, and with only terminal pair of spurs. Forewings in male with costal fold; vein 5 equidistant from 4 and 6; vein 3 from well before end of cell; vein 2 three times as far from base of wing as from end of cell. Hindwings with termen evenly rounded; vein 5 obsolete; 3 from just before end of cell.

Differs from *Phænicops*, Watson, by the costal fold.

1. CASYAPA CRITOMEDIA, Guer.

(*Hesperia critomedia*, Guer. voy. *Cog.*, ii., t. 18, fig. 6, 1829; *Thymele odix*, Boisd., voy. *Astrolabe*, Lep. p. 160, n. 2, 1832; *Chætocneme caristus*, Hew., Desc. Hesp., p. 21, n. 1, 1807.)

Male, 70 mm. Head, palpi, antennæ, thorax, and abdomen bright ochreous-fuscous, terminal joint of antennæ darker fuscous. Legs, dark fuscous. Forewings elongate-triangular, termen nearly straight; dark ochreous-fuscous; basal half of wing clothed with short ochreous-ferruginous hairs; a broad transverse orange-yellow fascia, from costa slightly beyond middle to near anal angle, but not quite reaching it, broadest on costa and continued as a moderate costal streak to base, attenuated towards anal angle; cilia dark fuscous. Hindwings with termen evenly rounded; color and basal hairs as in forewings; a faint ochreous line along posterior extremity of cell; a very broad orange-yellow

band along termen, becoming much narrowed towards vein 6 and not near reaching apex of wing; cilia dark fuscous, becoming orange-yellow on lower half of termen. Underside of both wings dark fuscous, markings of upper side reproduced in pale yellow, but band on hindwings not reaching beyond vein 6; a pale yellow dorsal streak on forewings.

Herberton and Cape York, Queensland; three specimens in January. Occurs also in New Guinea.

2. PHOENICOPS, Watson.

Club of antennæ elongate, pointed, bent. Palpi ascending, terminal joint very short, obtuse. Posterior tibiæ without middle spurs. Forewings in male without characters; 5 parallel to 4 and 6, slightly nearer 6 at base. Hindwings; 5 obsolete.

An endemic genus, comprising the three largest and handsomest species in the Australian group.

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|-----------------------------------------------------------------------------------|-----|-----|-----|-----|----------------------|
| 1. Forewings dark fuscous, transverse band yellow | ... | ... | ... | ... | 3 <i>Porphyropis</i> |
| 2. Forewings fuscous, transverse band whitish | ... | ... | ... | ... | 1 <i>Beata</i> . |
| 3. Forewings orange, transverse band broken into two, large whitish hyaline spots | ... | ... | ... | ... | 2 <i>Denitza</i> . |

2. PHOENICOPS BEATA, Hew.

(*Netrocoryne beata*, Hew. Desc. Hesp., p. 22, n. 1, 1867; Ex. Butt. V. Hesp., figs. 2, 3, 1874).

Male and female, 64-80 mm. Head, thorax, and abdomen ochreous-fuscous. Palpi, antennæ, and legs ochreous, palpi strongly mixed with orange; eyes dull carmine. Forewings elongate-triangular, costa gently arched, termen bowed, oblique, somewhat sinuate beneath apex; bright ochreous in male, ochreous-fuscous in female; markings of forewings in male as in *denitza*, but only one subapical spot; female with a moderately broad oblique transparent whitish fascia, from beyond middle of costa to just above anal angle, not quite reaching costa, containing a small triangular spot of ground color above middle, edges of fascia irregular, lower third constricted, costal edge ochreous; a small whitish spot beyond termination of cell, sometimes absent; cilia ochreous-fuscous. Hindwings with termen rounded; color of respective sexes as in forewings, but mixed with orange in female; a small subtriangular spot of semi-transparent whitish in posterior extre-

mity of cell, beneath which is a quadrate orange patch; two roundish semi-transparent whitish spots between veins 2 and 4 near termen, generally absent; cilia as in forewings. Under-side of wings dull ochreous brighter in male; markings of upper side reproduced.

The male is similar in appearance to *denitza*, but at once distinguished by the absence of purplish neural streaks. The female is quite a different looking insect, but is readily known by the broad transparent fascia of forewings.

The larvæ feed on *Tristania*, *Eugenia*, and the camphor laurel. They draw two leaves together, one over the other in canopy-like form, with silken threads, and remain quiescent during the day, only emerging at night. Specimens feeding on the camphor laurel, which were protected by mosquito netting bound round the twigs, lived through the winter, changing in September and emerging in October. A second brood will change in February or March and be on the wing a fortnight or three weeks later. It is most active at dusk (Illidge).

Cooktown, Mackay, and Brisbane, Queensland; four specimens in November and December.

3. PHOENICOPS DENITZA, Hew.

(*Netrocoryne denitza*, Hew. Desc. Hesp., p. 22, n. 2, 1867; Ex. Butt. V. Hesp., f. 4, 1874; *Staud.*, Ex. Sch., t. 100, 1888.)

Male and female, 64-68 mm. Head, palpi, legs, and antennæ orange, club of antennæ blackish. Eyes carmine. Thorax and abdomen orange in male, purplish in female, female beneath orange. Forewings elongate, triangular, costa nearly straight, termen bowed, oblique; in male orange, in female iridescent bluish purple, with costa broadly suffused with orange in middle, apical and hind-marginal area dull orange; all veins in both sexes generally outlined with bluish purple; 2 large rounded semi-hyaline whitish spots, edged with purplish; first at extremity of cell, immediately followed by a small oblique streak of orange, more pronounced in female; second immediately below and beyond first, surmounted by an ovate, and below by a rounded similar spot, upper only separated by a vein; 3 smaller similar spots midway between cell and apex, placed obliquely outwards, median largest, lower smallest, dot-like in male, and sometimes nearly obsolete; cilia orange, mixed with fuscous in female. Hindwings with termen hardly prominent in middle; color as in forewings; all veins outlined with bluish purple; an ovoid orange spot

in middle of wing, edged above by a broad fuscous fascia, not continued to margin, edged by a similar fascia beneath, from the lower edge of which proceeds another fascia towards anal angle, but not reaching it; interneural spaces on termen broadly orange, duller in female; basal hairs of male yellowish, in female dull fuscous; cilia as in forewings. Underside of both wings with color as above, markings reproduced, but less distinct; base of wings in both sexes orange; fascia of hindwings more distinct.

A beautiful species, at once recognised by its brilliant coloring; its habits are similar to *beata*, Hew. The flowers of *Buddleia neemda* and the loquat (*Eriobotrya Japonica*) are a great attraction for this insect during March and April. The late Mr. G. Barnard, of Duaringa, bred this species for larvæ, feeding on *Tristania conferta*.

Brisbane, Rockhampton, and Duaringa, Queensland; Port Darwin; four specimens in November and December.

4. PHOENICOPS PORPHYROPIS, n. sp.

Male, 64 mm. Head, palpi, thorax, and abdomen dark fuscous, eyes blackish, post-orbital rims yellow abdomen beneath orange. Forewings with termen oblique, dark fuscous, suffused with iridescent purplish; a moderately broad transverse bright yellow band, edges irregularly dentate, from immediately beneath costa beyond middle to inner margin just above anal angle; cilia fuscous. Hindwings with termen rounded; color and cilia as in forewings; a bright yellow, rather narrow patch of yellow on termen just below apex.

Apparently somewhat allied to *Carysta (chætochrome) callicnemus*, Hew. (Desc. Hesp., p. 21, 1867; Exot., Butt. v. Hesp., fig. 1, 1874), but differs by the presence of markings on hindwings and different color of forewings.

Johnstone River, North Queensland; one specimen received from Mr. R. Illidge, taken in February.

3. NETROCORYNE, Feld.

Club of antennæ elongate, pointed, bent. Palpi porrected, terminal joint rather short, obtuse. Posterior tibiæ with all spurs. Forewings in male with costal fold; 5 parallel to 4 and 6, slightly nearer 6 at base. Hindwings; 5 obsolete.

The genus is confined to the Australian region.

5. NETROCORYNE REPANDA, Feld.

(Reise Nov. Lep. iii., p. 507, n. 882, t. 70, fig. 10, 1867; (?) *Goniloba vulpecula*, Prittw., Stett. Ent. Zeit., p. 187; n. 41, t. 3, fig. 2a. b., 1868.)

Male and female, 44-52 mm. Head orange, palpi fuscous above, white beneath. Antennæ ochreous, club and base blackish. Legs ochreous-fuscous. Thorax and abdomen fuscous. Forewings triangular, costa nearly straight, termen sinuate above and below middle; light ochreous, more or less infuscated; markings in male dull whitish, in female whitish, semi-hyaline, margined with dark fuscous; a large, somewhat quadrate spot at posterior end of cell, in female surmounted by a patch of yellowish on costa; a second, similar, beneath and beyond, surmounted by a smaller quadrate spot which touches both first and second spots, and enclosing a triangular spot of fuscous; in male the 3 spots are separate, in female the second quadrate spot is followed beneath by 2 smaller spots, lowest very small; an oblique transverse series of 3 sub-costal spots at three-fourths from base, placed on darker ground color, lower smallest; cilia dark fuscous. Hindwings with termen somewhat angulated in middle; color as in forewings; a rounded semi-hyaline whitish spot before middle; a dark fuscous fascia from middle of costa, curved round and ending on middle of inner margin; in female more or less broken up into spots; basal hairs ochreous-fuscous; cilia as in forewings. Under side of both wings with color and markings as above.

Although showing some variety in depth of coloring the species is easily recognised by the shape of hindwings. We have quoted *Goniloba vulpecula*, Prittw., as a synonym, but the figure in Ent. Stett. Zeit., is wretched, although undoubtedly pertaining to this species. Larva full fed, 30 mm. Moderate rather narrow, cylindrical, smooth, tapering towards posterior segments. Head black, body slaty-grey, second segment yellowish, third segment orange, with a transverse series of four round black spots two on each side of dorsal line; fourth and fifth segments, with similar series of four black quadrate spots; tenth segment with two larger quadrate black spots, placed on either side; twelfth and thirteenth segments orange, with a large black dorsal spot on extremity of each, and a series of sub-spiracular small black spots, three on either side of dorsal spots; two small black spots on anterior portion of eleventh segment; lines nearly straight, hardly waved; dorsal moderate, whitish, centred with fuscous throughout; spiracular, orange, narrow; subra-spiracular broad, whitish, well defined; sub-spiracular whitish. Spiracles orange, fuscous centred.

The young larvæ, which is semi-transparent yellowish-fus-

cous in its very early stages, cuts out a circular piece of the leaf, and forms a canopy-like shelter, leaving a small aperture for ingress and egress. On approaching adult size this shelter is deserted and a new one formed by drawing the edges of the leaves together, gradually extending the domicile until of suitable dimensions; in this last position the larva pupates during September and the imago is on the wing from November.

The eggs are laid in April on the upper side of the leaf. They are somewhat elongate-hemispherical in shape, and deeply grooved.

Feeds on *Callicoma serratifolia* (*Cunoniaceæ*), *Elæocarpus reticulatus*, and *E. cyaneus* (*Tiliaceæ*).

Sydney and Como, New South Wales; Brisbane to Cooktown, Queensland; November to March, nine specimens.

4. TAGIADES, Hüb.

Club of antennæ gradual, elongate, pointed bent. Palpi porrected, terminal joint short, obtuse. Posterior tibiæ with all spurs. Forewings in male without characters; 5 parallel to 4 and 6; slightly nearer 6 at base. Hindwings with 5 rudimentary.

An Indo-Malayan genus of considerable extent; represented in Australia by the single known species. The insects are mostly colored fuscous and white, the species under review being no exception to the rule.

6. TAGIADES JANETTA, Butler.

Trans. Ent. Soc., Lond., p. 519 (1870); *T. gamelia*, *Misk. Proc. Roy. Soc., Q'd.*, p. 146 (1889).

Male, 50 mm. Head, thorax, palpi, antennæ, and abdomen dark fuscous. Palpi beneath whitish. Legs fuscous, strongly mixed with whitish. Forewings elongate, triangular, costa rather strongly arched, termen hardly bowed, oblique; fuscous with silvery-white markings; 2 somewhat trapezoid spots just before end of cell, their apices more or less confluent; 2 moderate spots beyond and below extremity of cell, first irregularly diamond-shaped; second below and before, somewhat triangular; an irregular oblique series of 3 subcostal spots at three-fourths from base, median smallest, upper sometimes surmounted by an additional minute spot; 2 small spots placed obliquely beyond and beneath lowest spot; cilia fuscous. Hindwings with termen rounded; white, basal half, except along inner margin, light fuscous; a

dark fuscous patch at apex, continued along termen to one-third, becoming more or less confluent with basal patch on costa; 2 moderate quadrate dark fuscous spots immediately preceding apical patch, lower largest and more distinct; cilia white, an apical patch fuscous. Under side of forewings with color and markings as on upper side, but cellular spots strongly confluent and surmounted by an elongate silvery-white mark; a more or less defined whitish sub-terminal band, broadest and more pronounced on lower third. Hindwings beneath white; a dark fuscous streak, commencing indistinct and narrow at base, suddenly becoming very broad and continued round to termen at one-third, termination abrupt; quadrate spots as on upper side; a small fuscous streak on termen above anal angle; cilia as above.

Somewhat allied to *Japetus*, Cr.

Brisbane to Cape York, Queensland; four specimens, November and December.

5. MESODINA, MEYR.

Club of antennæ elongate, pointed, bent, sub-porrect, terminal joint very short. Posterior without middle spurs. Forewings in male without stigma; 5 parallel to 4 and 6, slightly nearer 6 at base. Hindwings; 5 obsolete. The two species may be recognised as follows:

1. Forewings with whitish markings ... 8 *Halysia*.
2. Forewings with yellowish markings ... 7 *Aeluropis*.

7. MESODINA AELUROPIS, MEYR., M.S.S.

Male and female, 30-44 mm. Head, palpi, antennæ, thorax, legs and abdomen dark fuscous, thorax and palpi beneath whitish, antennæ annulated beneath with white, club reddish-carmine, beneath white, abdomen and legs mixed beneath with whitish, posterior legs more whitish. Forewings elongate-triangular, termen gently bowed, oblique; dark fuscous, with yellowish markings; basal third more or less clothed with short golden hairs; a large quadrate spot in posterior end of cell, posterior edge slightly sinuate in middle, anterior edge nearly straight; a roundish spot beyond lower extremity of first; a second, similar, twice as large immediately beyond, below, and a third sometimes absent in male, small, placed exactly below middle of second; an oblique transverse row of three sub-apical spots, lower largest; sometimes absent in male; cilia dark fuscous, becoming mixed with whitish in middle of termen and almost wholly whitish around anal angle.

Hindwings with termen rounded; apex hardly prominent; color as in forewings; a large patch of rather long golden-ochreous hairs extending from base to near two-thirds not near reaching costa or inner margin; cilia as in forewings, but more whitish. Under side of forewings with color as above, upper half of termen broadly blue-grey; whole of cell filled up with orange, 3 posterior spots of upper side reproduced and confluent with posterior edge of cell; lower of the 3 sub-apical spots of upper side reproduced; cilia fuscous-grey, with dark fuscous spots at extremities of veins. Hindwings grey-whitish, somewhat lilacine; an obscure ring of fuscous before middle; a row of 3 or 4 similar rings at two-thirds from base; cilia greyish-fuscous.

Larva full fed, 35 mm. Cylindrical, very pale greenish; head thickly covered with fine white erect hairs, body finely clothed with similar hairs, but in a lesser degree. The whole larva is covered with a fine white powder, causing it to appear wholly white. It apparently lives head downwards, as the opening of the sheaf which it constructs is below, and not above as is usual in this group; before pupating the larva closes the opening by spinning a silken pad across it. It pupates head downwards. Feeds on *Patersonia*, *sp.* (*Iridaceae*), and imago emerges during October.

The imago bears some resemblance to some species of *Telesto*, the female being similar to *donnysa* on forewings above.

Mount Kembla and Katoomba, New South Wales; several specimens bred in February and March.

8. MESODINA HALYZIA, Hew.

(*Hesperilla halyzia*, Hew. Desc. Hesp., p. 38, n. 1, 1868; Ex. Butt. v. Hesp. and Cyclop., f. 7, 1874; female, *A. and S.*, Vict. Butt., p. 125, 1893).

Male and female, 28-34 mm. Head, thorax, palpi, and abdomen dark fuscous, palpi and thorax beneath white. Legs whitish. Antennæ fuscous, annulated with white, club reddish, internally white. Forewings elongate, triangular, costa somewhat sinuate in middle, termen oblique, not bowed; dark fuscous with metallic reflections; markings whitish; a large, somewhat quadrate spot in posterior end of cell, sinuate anteriorly and posteriorly; a cartridge-shaped spot immediately beneath and beyond, beneath which is another large quadrate spot, only separated by intervening vein; an oblique transverse row of 3 sub-apical spots, absent in male; cilia fuscous, basal half darker. Hindwings with termen rounded; without

markings; color and cilia as in forewings. Under side of forewings with color and markings as above; a broad dull bluish-white costal streak, narrowly mixed with yellowish on basal half and becoming very broad on apical and area of termen, but only reaching to two thirds of termen; cilia as above, but lighter and somewhat chequered with fuscous. Hindwings dull whitish, with a lilacine bloom; a very ill-defined row of fuscous dots, from three-fourths of costa towards inner margin at three-fourths, but not reaching it; an elongate streak of golden-fuscous, from base direct to anal angle, edged anteriorly by a streak of dull purplish; cilia as above.

A sombre-looking species, not like any other in the group.

The larva, method of pupating, and food plant are as in *aeluropis*.

Como, Katoomba, and Sydney, New South Wales; Perth, Western Australia; from October to April, three specimens.

6. *TELESTO, Boisd.

Club of antennæ elongate, pointed, more or less bent. Palpi obliquely ascending or sub-perrect, terminal joint short, sub-conical. Posterior tibiæ with all spurs. Forewings in male with stigma; 5 parallel to 4 and 6, slightly nearer 6 at base. Hindwings; 5 obsolete.

In the following tabulation the characters are drawn from the male insects, unless otherwise specified:

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| 1. Under side of hindwings reddish, markings and veins outlined with whitish; no markings in cell | 13 | <i>Picta</i> . |
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| Under side of hindwings creamy - white, markings black; cell with a large white centred elongate spot at extremity | 2 | |
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| 2. Hindwings above with orange transverse fascia unevenly waved, posterior extremity produced | 10 | <i>Ornata</i> . |
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| Hindwings above with orange transverse fascia almost even throughout | 1 | |
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| 3. Forewings above with markings large, shining-golden; cilia strongly barred. Size, 36 mm. | 9 | <i>Peronata</i> , male. |
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- Forewings above, with markings much reduced in size; cilia barred. Size, 25-29 mm.... 5
4. Hindwings beneath bright yellowish - orange; markings black, comprising 3 transverse series of spots ... 12 *Munivonga*, female:
- Hindwings beneath dull reddish - fuscous; markings creamy-white, comprising 2 transverse, irregular series of spots 11 *Mastersi*.
5. Hindwings beneath fuscous, with 10 silvery-white spots arranged in 3 transverse series 14 *Crypsargyra*.
- Hindwings beneath reddish-fuscous, with one large cellular and 3 small sub-median white spots 6
6. Stigma erect, narrow black, interrupted, extending to below vein 1 16 *Dirphis*.
- Stigma black, thick, curved, edged broadly posteriorly with dull fuscous 7
7. Hindwings beneath bright ochreous, with transverse, twice sinuate, silvery-whitish sub-median fascia... 18 *Drachmophora*.
- Hindwings beneath reddish-fuscous, markings fuscous, dot-like 8
8. Forewings with stigma, narrow, black, erect, reaching inner margin 21 *Donnysa*.
- Forewings with stigma, ovoid, blotch-like, black, not near reaching inner margin ... 26 *Flammeata*.
9. Forewings above with two additional white spots, beyond subcostal series 22 *Chaostola*.
- Forewings above without such spots 10

10. Forewings above with cellular spot curved upwards at extremity; hindwings with orange median patch above
 Forewings above with similar markings; hindwings without markings above ... 23 *Andersoni*.
11. Wings strongly suffused with purplish above; markings yellow 26 *Flammeata*, female.
 Wings fuscous above, markings white 12
12. Forewings above with 2 additional moderate white spots joining subcostal series; patch on hindwings dull white 28 *Atralba*.
 Forewings similarly marked; patch of hindwings orange... 10
13. Forewings above with cellular spot ovoid, golden-yellow, occupying one-third of cell
 Forewings above with cellular spot very small, whitish, transverse 24 *Dispar*.
 14
14. Forewings with stigma dull whitish, entire, blackish edged, reaching inner margin, cellular spot narrow... 31 *Ismene*
 Forewings with stigma similar; cellular spot absent ... 18
15. Forewings with stigma black, very oblique, broadly-lanceolate, not reaching inner margin; cellular spot elongate whitish 33 *Perronii*.
 Forewings with similar stigma, but less oblique; cellular spot absent 38 *Crypsigramma*.
16. Hindwings above with transverse series of 4 whitish spots 34 *Compacta*, male.
 Hindwings above without such spots 34 *Compacta*, female.

17. Forewings above fuscous, with upper half of cellular spot, strongly excised and becoming 8-shaped 33 *Perronii*, female
 Forewings above light fuscous; cellular spot narrow, hardly constricted above 31 *Ismene*, female.
18. Forewings above without markings, except whitish stigma 39 *Bathrophora*, male.
 Forewings above with cellular spot absent 39 *Bathrophora*, female
19. Stigma narrow, erect, black, somewhat waved, not interrupted; patch of hindwings above bright orange ... 15 *Chrysotricha*.
 Stigma similar, broken into 4 spots; patch of hindwings dull fuscous 6
20. Hindwings beneath reddish, spots placed as in *Dirphia*... 19
 Hindwings beneath purplish, fuscous without markings or faintly indicated 21
21. Forewings with stigma, narrow, curved, white 30 *Leucostigma*.
 Forewings with stigma, moderately broad, oblique, dull grey-whitish 14
22. Hindwings above with two whitish median spots; forewing with cellular spot quadrate 19 *Monticolæ*.
 Hindwings above with two somewhat hyaline spots; forewing with cellular spot sickle-shaped 36 *Croceus*.
23. Under side of hindwings fleshy-ochreous, with curved series of rather large white fuscous-edged spots 20 *Cyclospila*.
 Under side of hindwings reddish-ochreous, with 3 or 4 indistinct fuscous dots ... 25

24. Forewings with stigma, waved,
narrow, entire, black;
lower sub-apical spot some-
times absent 32 *Serguttata*.
Forewings with stigma narrow,
entire, reddish; sub-apical
spots present 27
25. Forewings above with all mark-
ings absent, except ovoid
black stigma 27 *Tymbophora*.
Forewings above with all mark-
ings present, stigma broken
into 3 small spots... .. 16
26. Hindwings above with very
large bright orange trian-
gular patch in middle 25 *Idothea*.
Hindwings above with very
narrow transverse orange
median band 5
27. Hindwings above with three
white spots; one in cell,
two sub-median 35 *Senta*.
Hindwings above with one
whitish spot in cell 6
28. Under side of hindwings yel-
lowish without markings;
cilia chequered 37 *Xanthomera*.
Under side of hindwings dull
ochreous without markings;
cilia fuscous... .. 33

This is the dominant genus in Australia, and likely to be much increased. (We have 3 species unnamed, which are probably new, but not in a fit condition for description.) The female specimens bear considerable resemblance to species of the genus *Trapezites*, Hüb; but the male are easily distinguished by the stigma, which, although showing considerable variation, is always present. This character separates it from *Trapezites*.

9. TELESTO PERORNATA, Kirby.

(*Hesperilla perornata*, Kirby. Ann. Mag. N.H., vi., p. 437, 1893; *A. and S.*, Vict. Butt., p. 121, 1893.)

Female, 36 mm. Head, thorax, palpi, antennæ, and abdomen dark fuscous, head and thorax mixed with golden-ochreous hairs, palpi beneath ochreous-whitish, thorax yellowish hairs

beneath, antennæ mixed with ochreous on basal half, abdomen with broad whitish segmental rings, anal tuft ochreous. Forewings elongate, triangular, costa gently arched at base, thence straight, termen oblique, gently bowed; golden-fuscous; markings shining golden-ochreous; basal hairs golden-ochreous; a large rounded orange spot in posterior end of cell, sometimes irregularly mixed with fuscous anteriorly; an elongate, quadrate spot above inner margin, slightly beyond one-third from base; an irregular triangular-shaped spot above inner margin before anal angle, sometimes constricted anteriorly; an oblique transverse row of 3 confluent sub-costal spots at three-fourths from base; a moderate quadrate spot above and slightly beyond second inner marginal spot; a narrower and slightly more elongate spot immediately above quadrate spot, only separated obscurely by dividing vein; cilia whitish ochreous, chequered with blackish. Hindwings with termen irregularly rounded; color as forewings, but somewhat darker; a broad curved median orange band, anterior edge encircling cell, posterior edge more or less obscurely crenulate; cilia as in forewings. Under side of forewings dull fuscous, all markings of upper side reproduced; a transverse row of 4 confluent spots along upper half of termen to apex, posteriorly emarginate; cilia as above. Hindwings beneath yellow-whitish; markings black; a spot at base; an elongate spot on costa in middle; a second, smaller, immediately below; a third, cartridge-shaped, very large and occupying whole of cell, except an elongate median streak of ground color; a fourth, moderate, immediately below; an irregular spot just before apex, followed at its anterior and posterior extremities by a row of 5 spots, those along termen being the smaller; inner margin broadly fuscous; cilia as in forewings.

Closely allied to the following; best distinguished by its comparatively large size, narrower band of upper side of hindwings, and special markings of under side of forewings.

The larvæ feed on *Cladium*, and are pale yellowish-green, markings hardly traceable. The pupæ are blackish and have two blunt projections on forehead.

Sydney, New South Wales; Victoria; four specimens in March.

10. TELESTO ORNATA, Leach.

(*Hesperilla ornata*, Leach, Zool. Misc. I., p. 126, t. 55, figs. 4, 5, 1815; *Math. Trans. Ent. Soc.*, p. 185, t. 6, figs. 9, 9a, 1888; *A. and S. Vict. Butt.*, p. 120, 1893.)

Male and female, 28-34 mm. Head and palpi blackish, spotted

with ochreous, palpi ochreous beneath, collar orange. Thorax and abdomen dark fuscous, thorax clothed with ochreous hairs, and clothed with white beneath, abdomen with whitish-ochreous segmental rings, anal tuft black, mixed with white. Antennæ black, sharply annulated with white beneath, club whitish beneath. Legs whitish-ochreous, tibiæ and tarsi blackish. Forewings elongate, triangular, costa nearly straight, termen nearly straight, oblique in male, rounded in female; dark golden-fuscous, somewhat shining; basal hairs yellowish; markings golden-ochreous; a large quadrate spot in posterior end of cell, somewhat sinuate in male anteriorly; stigma black, erect, narrow, sometimes broken into two spots, from above inner margin at two-thirds to lower extremity of termination of cell, where it is broadest; a moderate cartridge-shaped spot immediately beyond end of cell, in male much smaller; a quadrate spot immediately below, in male very small, only separated from preceding spot by intervening vein; an oblique transverse row of 3 elongate sub-costal spots at two-thirds from base, upper smallest; cilia yellowish, barred with fuscous. Hindwings with hind-margin somewhat prominent toward anal angle; dark fuscous, darker than forewings; basal hairs yellowish; a moderately broad transverse orange median band, upper extremity encircling termination of cell and continued as a quadrate spot towards inner margin, posterior edge somewhat crenulate, becoming elongate on outer edge, but not near reaching termen; cilia as in forewings. Under side of forewings dark fuscous, spots of upper side reproduced, but less distinct, cellular spot surmounted by an elongate cuneiform whitish spot, somewhat suffused; a moderately broad transverse whitish band, from just before apex and slightly curved round to near upper extremity of spot following stigma, broadest beneath, emitting from its anterior edge of upper-half whitish streaks to the 3 sub-costal spots and enclosing 3 ovoid spots of ground color, and enclosing on edge of termen 4 nearly similar spots of ground color, upper largest, third obscure; a dull, in female bright, somewhat quadrate whitish spot on vein 1 at two-thirds from base; cilia as above, but more distinctly barred. Hindwings pale whitish-ochreous, markings black; a round spot on costa at base; an elongate spot on costa before middle; a similar smaller sub-costal spot beyond middle; a large pyriform spot in cell, centred with ground color; a rounded spot beneath first elongate spot, a second below second sub-costal spot, and a third at apex; a row of 5 spots along termen, quadrate, upper smallest, followed above by a row of 4 parallel more elongate spots, sometimes median

pair and more or less confluent with those on termen; a large cuneiform spot at base, below cell; inner margin broadly fuscous; cilia as in forewings, somewhat reddish tinged at base of black bars.

Closely allied to the preceding, but immediately distinguished from that species by the narrower and different shape of orange band of hindwings and smaller markings. The male is subject to slight variation in the development of the post-stigmal dot, which in some specimens is very suffused.

Larva full fed, 30 mm. Moderate, cylindrical, somewhat wrinkled, with hardly perceptible short whitish hairs, those on posterior segments being longer. Head pale ochreous-fuscous, with a fine reddish median stripe, becoming V-shaped on forehead, and a fuscous-reddish spot on either side of mouth. Body yellowish-fuscous, markings fuscous, faintly indicated; dorsal well developed, sub-dorsal and lateral similar, but more conspicuous on segments 9-13; spiracular and sub-spiracular hardly traceable; supra-spiracular ochreous whitish; full fed in October; imago emerges during October and November. Feeds on *Cladium asperum*. The pupæ are fuscous, and are furnished with two long hornlike projections on anterior segment. The pupal stage is of very short duration.

Sydney, Newcastle, and Bathurst, New South Wales; Jind-wick, Leongatha, and Wandin, Victoria; Cooktown and Mackay, Queensland; October to January, five specimens.

11. TELESTO MASTERSI, Waterh.

(*Hesperilla Mastersi*, Waterhouse. Proc. Linn. Soc., N.S.W., p. 54, 1900, pl. 1, figs. 5-8.)

Male and female, 40-46 mm. Head fuscous. Palpi yellowish-white. Antennæ and legs fuscous, antennæ annulated beneath with whitish, club reddish beneath. Thorax and abdomen above blackish, with yellowish segmental rings. Forewings elongate, triangular, costa almost straight, termen oblique; dark golden fuscous; basal hairs orange yellow; markings ochreous-yellow, hyaline; a large quadrate spot in posterior end of cell, in female indented anteriorly and posteriorly; a second, moderate, beyond extremity of cell; in female there are 2 similar spots immediately below the second, the upper large, quadrate, the lower somewhat elongate; an oblique transverse series of 3 small sub-costal spots at two-thirds from base; a small spot in female at one-third from base; stigma black, moderate, entire from beyond middle of inner margin to beyond lower termination of cell; cilia fus-

cous, chequered with ochreous-white. Hindwings with termen rounded in female, anal angle in male somewhat prominent; color as in forewings, but somewhat darker; basal hairs yellow; a large, broad orange-yellow transverse median patch, somewhat narrowed in male, not near reaching costa or inner margin, upper edge irregular, posterior hardly straight; cilia as in forewings. Under side of forewings dark fuscous, lighter towards apical third; markings of upper side, except stigma, reproduced; costa yellowish-white, spotted with fuscous on posterior half; inner margin yellowish-white, broadest in middle; cilia as above, but more pronounced. Hindwings reddish-fuscous; markings ochreous-white; basal third of costa ochreous-white; a moderately broad band from costa near apex to middle of inner margin, separated into four spots, first and second confluent extending to middle of disc, third and fourth elongate, fourth on inner margin; a black spot in band near costa; a parallel band of about 3 or 4 roundish spots from inner margin above anal angle to below apex; cilia as in forewings.

Allied to *Ornata*, but the lesser number of spots of forewings, and especially by the arrangement of the markings of under side of hindwings, this species is at once recognised; it is the finest yet described.

Clifton and Mount Kembla, Illawarra, New South Wales; taken by Mr. A. G. Hamilton and G. A. Waterhouse, in January.

12. TELESTO MUNIONGA, Oll.

(*Hesperilla munionga*, Olliff. Proc. Linn. Soc., New South Wales. Ser. 2, iv., p. 623, 1889.)

Female, 29-35 mm. Head, thorax, and abdomen dark fuscous, segmental margins of abdomen yellowish, more distinct beneath. Antennæ and palpi blackish, antennæ annulated with yellow beneath, palpi whitish beneath. Legs ochreous. Forewings elongate, triangular, costa nearly straight, faintly sinuate in middle; dark fuscous-golden; basal hairs yellowish, not very dense; markings orange; a large somewhat cuneiform spot in posterior end of cell, narrowed beneath; a second, cartridge-shaped, beyond termination of cell, lying between veins 2 and 3; a third, quadrate, immediately below, only separated by intervening vein; a small spot above inner margin at two-thirds from base; a transverse series of 3 elongate sub-costal spots at two-thirds from base; cilia dark fuscous, broadly chequered with orange. Hindwings with termen rounded; color as in forewings; a rather short, narrow, orange median band at end

of cell, not near reaching margins; cilia as in forewings. Underside: Forewings dark fuscous; markings of upper side suffusedly reproduced; anterior half of cell blackish; a moderately thick yellow costal streak from base to apex, at apex becoming blotch-like and extending to above middle of termen, within the blotch are 3 elongate blackish spots just beyond the 3 yellow sub-costal spots, and a series of 4 round blackish spots along termen; cilia as above. Hindwings yellow with blackish markings; 2 roundish spots at base; 3 transverse series of elongate spots, first before, starting from a very elongate spot on costa, to before middle of inner margin; second from beyond middle of costa to beyond middle of inner margin; third along termen, the latter series being roundish; cilia as in forewings.

The bright orange yellow markings of under side of hindwings in contradistinction to the other similarly marked species makes this species easy of recognition.

Mount Kosciusko, New South Wales; one specimen.

13. TELESTO PICTA, Leach.

(*Hesperilla picta*, Leach. Zool. Misc. I., p. 126, t. 55, f. 4, 5, 1815; *Math. Trans. Ent. Soc., Lond.*, p. 187, 1888; *A. and S., Vict. Butt.*, p. 121, 1893.)

Male and female, 32-38 mm. Head, palpi, thorax, antennæ, and abdomen dark fuscous, palpi strongly mixed with whitish beneath, thorax and abdomen clothed with short, fine yellowish hairs, abdominal segments more or less outlined with yellow, antennæ annulated with whitish beneath. Legs ochreous, mixed with fuscous and whitish. Forewings elongate, triangular, termen gently bowed, oblique; dark golden-fuscous, basal hairs yellowish; markings golden-ochreous; a large somewhat rounded spot in posterior end of cell, anterior edge with a slight projection in middle, posterior edge faintly indented in middle; stigma erect, waved, entire, narrow, from vein 1 above inner margin at two-thirds to beyond lower extremity of cell; a somewhat quadrate spot touching apex of stigma; another spot, larger, just below, only separated by dividing vein; a moderate suffused spot above inner margin at two-thirds from base, most distinct on under side; a similar spot at one-third from base; an oblique transverse series of 3 small sub-costal spots at two-thirds from base; cilia dark fuscous. Hindwings with termen rounded, anal angle somewhat prominent in male; dark fuscous; basal hairs ochreous-fuscous; extending to median band and along inner margin;

a narrow median orange transverse band, constricted posteriorly and not reaching inner margin, upper edge encircling posterior extremity of cell; cilia orange, chequered with black. Under side of forewings dark reddish-fuscous, markings of upper side, except stigma, reproduced; a series of 4 or 5 white lunate spots along apical third of termen; a very fine interrupted whitish line along termen; cilia as above. Under side of hindwings reddish-fuscous; all veins outlined with whitish ochreous; a whitish-ochreous moderately thick transverse band from just before apex to above middle of inner margin, hardly reaching inner margin; a fine crenulate parallel sub-terminal whitish line, from apex to vein 1, becoming blotch-like at extremity; a fine whitish line along termen; cilia as above.

Easily recognised from its allies by the markings of under side of hindwings and outlining of veins.

Mr. G. F. Matthew found the larvæ feeding upon *Cladium mariscus*, and states they are of the usual skipper shape, pale transparent olive in color, having the head sienna red, with a V-shaped mark on face. Mr. Waterhouse states that he has bred it from larvæ feeding on *C. asperum*, and that the larvæ and pupæ are almost identical in appearance with *Ornata*.

Sydney and Bathurst, New South Wales; Croajingalong, Victoria; from January to April.

14. TELESTO CRYPSARGYRA, Meyr.

(Proc. Linn. Soc., N.S.W., ser. ii., p. 829, 1887.)

Male and female, 25-29 mm. Head black, spotted with pale yellow. Palpi pale yellow, apex black. Antennæ black, beneath spotted with pale yellow. Thorax fuscous, clothed with yellow hairs. Abdomen black, segmental margins pale yellow. Forewings elongate, triangular, costa nearly straight, termen rounded, slightly oblique; dark fuscous; basal hairs yellowish; spots light ochreous-yellowish, somewhat hyaline; first moderate, irregular, in middle of disc; 3 very small, sub-confluent, in an oblique transverse row beneath costa at three-fourths; one small sub-quadrate, between veins 3 and 4 at base, beneath which in male is a minute dot; in female a rather larger adjacent similar spot; stigma erect, black, from disc beyond middle to two-thirds of inner margin; in female a small yellow spot near inner margin before middle, and a larger one at two-thirds; cilia fuscous, terminal half sometimes obscurely spotted with pale yellow. Hindwings with termen rounded; blackish-fuscous; a mode-

rate transverse fascia like band in middle of disc, narrowed and less defined beneath, not nearly reaching margins; cilia blackish, more or less chequered with yellow. Under side of forewings dark fuscous; markings of upper side, except stigma reproduced; a yellowish suffusion beneath costa on basal half; a small yellow spot on costa at four-fifths; a yellow bar before termen, from costa to vein 4; an interrupted line along termen. Hindwings beneath fuscous-ferruginous; veins partly outlined with yellowish; an oblique pale yellowish blotch from costa near base; ten snow-white spots, arranged as follows: First small, beneath middle of costa; second longitudinal-linear, in disc before middle; third cuneiform, irregular, beneath disc, before middle; fourth moderately large, trapezoidal, in middle of disc; fifth sub-oval, beneath costa before apex; remaining five rather small, forming a sub-marginal series, 2 upper smallest and sometimes confluent.

Very distinct and handsome; easily known by the spots of under side of hindwings.

The larva when full fed is similar in markings and appearance to *Picta* and *Ornata*, but smaller and somewhat blue-green in appearance and deeper in tone than either of the above species. It feeds on a species of *Cladium*, and is full fed in November. The pupa is similar to *Ornata*, and is furnished with appendages as in that species.

Blackheath and Katoomba, New South Wales, from November to February.

15. TELESTO CHRYSOTRICHA, n. sp.

Male, 40 mm. Head, palpi, thorax, antennæ, legs and abdomen ochreous-fuscous, palpi beneath ochreous-whitish, head, thorax, and abdomen clothed with yellowish hairs. Forewings elongate, triangular, termen nearly straight, oblique; dark fuscous, with yellowish markings; basal hairs orange; a large quadrate spot in posterior extremity of cell, indented anteriorly and posteriorly; a cartridge-shaped spot at base of veins 3 and 4, a smaller one, immediately below, and an oblique transverse series of three sub-apical spots; stigma black, waved, moderate, erect, from above inner margin beyond middle to base of veins 3 and 4; cilia fuscous, darker at base. Hindwings with termen rounded, color as in forewings; basal and inner marginal hairs orange; a large median patch of orange scales, somewhat divided by intervening veins; cilia yellowish.

Under side of forewings reddish-ochreous; markings of upper side reproduced; basal two-thirds of cell orange, dorsal area

pale yellow on posterior half more or less edged above by its own width of pale yellow; spot between veins 2 and 3 much enlarged, and pale yellow. Hindwings reddish; markings silvery-white, edged with fuscous; a round spot in posterior extremity of cell; a similar spot at two-thirds from base, between veins 6 and 7, and two similar between veins 2 and 4; dorsal area pale yellowish; cilia as above.

Allied to *Dirphia*, Hew., but separable by the different coloring of hindwings above and below, in other respects similar.

Northampton and Albany, Western Australia; two specimens in November.

? 16. TELESTO DIRPHIA, Hew.

(*Hesperilla dirphia*, Hew. Desc. Hesp., p. 38, n. 2, 1868; male, *H. trimaculata*, Tepp. Trans. Roy. Soc., S.A., iv., p. 32, t. 2, fig. 4, 1881; female, *H. quadrimaculata*, *ib. l.c.*, fig. 2.)

Male and female, 35-47 mm. Head, palpi, thorax, antennæ, and abdomen dark golden-fuscous, palpi yellowish beneath, thorax clothed with long yellowish hairs, antennæ annulated with whitish, club reddish-fuscous, internally whitish. Legs fuscous. Forewings elongate, triangular, costa nearly straight, faintly sinuate in middle, termen hardly round, oblique; dark golden-fuscous, with whitish-ochreous markings; a large, somewhat quadrate spot in posterior end of cell, edges sinuate; a quadrate spot beyond end of cell, near base of veins 3 and 4; in female a similar spot immediately below; a moderate quadrate spot lying on vein 1 and three-fourths from base, absent in male; an oblique transverse row of 3 quadrate sub-costal spots at two-thirds from base; stigma black, narrow, erect, somewhat broken into 5 spots, from above inner margin beyond middle to beyond posterior extremity of cell; cilia dark fuscous. Hindwings with termen rounded, color as in forewings; basal half of wing clothed with long dull yellowish hairs; a round yellow spot in cell near posterior extremity; cilia ochreous-fuscous. Underside of forewings ochreous-fuscous, median third of wing dark fuscous, markings of upper side reproduced, except stigma and upper and lower of sub-costal spots; in the male are 2 extra spots placed as in male; cilia as above. Under side of hindwings reddish-ochreous; markings snow-white, edged with blackish; a large roundish spot in end of cell; a second in disc at two-thirds and 2 others, much smaller, contiguous to, and below second; cilia ochreous-fuscous, around inner margin fleshy.

Readily known by the white spots of under side of forewings; in some female specimens the cellular spot of upper side of hindwings is absent.

Blackwood, Belair, and Port Victor, South Australia; Grampians, Victoria; Perth, Western Australian (*S. Angel*); Katoomba and Sydney, New South Wales; in October and November. Mr. Miskin records it from Cape York, Queensland, so that it would appear to have a very wide range.

Larva full fed, 44 mm. Moderately stout, cylindrical, nearly smooth, clothed with short, hardly perceptible whitish hairs, those on anal segment being more dense, longer, and fuscous tinged. Head rugose, black; body yellowish-green, three anal segments mixed with fleshy-pink, dorsal line well developed, moderate, greenish, becoming obscured anteriorly; spiracular, sub-spiracular, and supra-spiracular hardly traceable, spiracles small, fuscous. Full fed in October; feeds on *Lepidospermum concavum*. The pupa is cylindrical, with two large, short, somewhat rose-shaped projections on anterior segment. Imago emerges from early in October to December.

17. TELESTO DOMINULA, Plotz.

(*Telesto dominula*, Plotz, Stett. Ent. Zeit. xlv., p. 379, 1884.)

"16 mm (measurement of one wing only). Hindwings above unspotted. The typical spots are white. In male forewings only with the apical dots; a narrow transverse spot in the cell, and a small spot in cell 3; a strong black and grey stigma runs from vein 1 to the angle of cell 3, almost transverse and bent towards termen. Hindwings beneath fuscous; a dirty white pear-shaped spot stands in the cell towards base, behind the middle runs a similar-colored waved band, cut by the dark veins, from cell 1c to cell 6; in cell 7 stands a separate spot, and one towards termen in cell 5. In cell 1c the band sends a light streak to base, dilated towards the extremity." The above is translated from Plotz's original description, and would indicate a species very similar to *Drachmophora*, Meyr., in appearance.

"Tasmania."

18. TELESTO DRACHMOPHORA, Meyr.

(Ent. Mo. Mag., p. 82, 1885.)

Male and female, 27-30 mm. Head, palpi, antennæ, thorax, and abdomen dark fuscous, palpi whitish-yellow beneath, thorax clothed above with greenish-yellow hairs, beneath whitish, abdominal segments whitish beneath. Legs fuscous.

Forewings elongate, triangular, costa straight, termen rounded, oblique; dark golden-fuscous; markings ochreous-white; a small elongate spot in posterior end of cell; a second, roundish, between veins 3 and 4, near base; a third, larger, just below and beyond, absent in male; a fourth, resting on vein 1 at two-thirds from base; an oblique transverse series of 3 sub-costal quadrate spots at three-fourths from base; stigma short, obliquely curved, from inner margin above vein 1 to beyond posterior extremity of cell, edged posteriorly by 3 very dull ochreous-fuscous spots; cilia fuscous, barred with dull ochreous. Hindwings with termen rounded; color as in forewings; basal half of wings clothed with long ochreous hairs, becoming orange along upper margin of cell; cilia as in forewings. Underside of forewings dark fuscous, costa throughout, broadly orange; markings except stigma and accompanying spots as on upper side; 3 or 4 suffused whitish spots along upper half of termen; cilia as above, but more pronounced. Underside of hindwings golden fulvous, becoming darker on margins; an irregular silvery-white spot at about one-third from base; a second, elongate, lying on vein 1 near base; a moderately broad irregularly edged, waved transverse silvery-white fascia, from just beneath costa beyond middle to vein 1 above anal angle, strongly sinuate on vein 6, brightest and broadest between veins 2 and 4; a row of suffused whitish spots above termen; inner margin yellowish; cilia as in forewings.

A very beautiful species on the under side; easily known by the curious form of the stigma and transverse fascia of under side of hindwings.

Somewhat similar in appearance beneath to *Dominula*, Plotz.

Deloraine, Tasmania; Moonbar, New South Wales; in March (and probably February).

19. TELESTO MONTICOLÆ, Oll.

(*Hesperilla monticolæ*, Oll. Proc. Linn. Soc., New South Wales, iv., p. 624, 1889).

Male, 24-25 mm. Head, thorax, palpi, and abdomen dark fuscous, palpi whitish beneath. Antennæ fuscous, spotted with whitish beneath. Forewings elongate, triangular, termen gently bowed, oblique; dark fuscous; three white spots; first sub-costal near apex, divided into three parts by veins; second in cell at posterior extremity; somewhat quadrate; third large just beyond and below lower angle of cell; a fourth spot just below third; stigma, black, moderately erect, slightly

waved, from above inner margin beyond middle to base of lower angle of cell; cilia ochreous-white, barred with fuscous-ochreous. Hindwings with termen rounded; color as in forewings; a white median spot, divided into two parts by bisecting vein; cilia as in forewings. Under side of both wings greyish-fuscous, somewhat ochreous tinged, forewings with ochreous basal hairs; markings as above; a whitish streak along upper half of termen. Hindwings with broad longitudinal bars of whitish, one in middle extending from base to termen, very conspicuous, and interrupted before extremity of cell where there is a fuscous spot, and again at about midway between cell and termen; an indistinct white bar near costa; a third near inner margin, both interrupted by a suffused fuscous spot at about two-thirds from base.

Somewhat like *Trapezites gracilis*, Tep., but the stigma forms a definite character.

Type in Australian Museum, Sydney; taken at Moonbar, New South Wales; two specimens in March.

20. TELESTO CYCLOPILA, n. sp.

Male and female, 33-38 mm. Head, palpi, antennæ, thorax, and abdomen dark fuscous, thorax clothed with golden-ochreous hairs, antennæ spotted with white beneath, club reddish above, palpi beneath whitish. Forewings elongate, triangular, costa faintly sinuate in middle, termen gently bowed; golden-ochreous, somewhat shining, basal third clothed with short yellowish hairs; markings golden, except sub-costal spots which are whitish; a large quadrate spot in posterior end of cell, indented above middle on anterior and posterior edges; stigma black, erect, slightly waved, but not broken into spots, gently curved inwards above inner margin, from two-thirds inner margin to base of veins 3 and 4; a moderate cartridge-shaped spot touching upper extremity of stigma; a similar smaller spot just below; an oblique transverse series of three whitish sub-costal spots at three-fourths from base; cilia dull whitish, basal half fuscous. Hindwings with termen rounded; basal hairs orange, extending to middle; an elongate-quadrate orange patch below cell in middle of wing; some orange scales below; cilia as in forewings. Underside of forewings dull fleshy-ochreous; wing below cell fuscous, except above anal angle, which is pale yellowish; markings of upper side, except stigma, reproduced; sub-costal spots edged posteriorly with dark fuscous; upper margin of cell orange; an oblique series of 3 spots below post-cellular cartridge-shaped

spot, first moderate, quadrate, somewhat projecting anteriorly; second smaller, about half size of first; third elongate and reaching termen, rounded anteriorly; cilia as above. Hindwings fleshy-ochreous, markings white, edged with fuscous; a round spot at end of cell; a curved series of 7 spots; first elongate, below costa at just before two-thirds; second, largest, immediately below and beyond; third and fourth small; fifth and sixth moderate; seventh small, last 5 parallel to termen; inner marginal area broadly pale yellowish; cilia as above.

Allied to *Donnyssa*, Hew., but separated by the fewer number of spots of upper side, and especially by the totally different color and markings of under side of hindwings, which in that species is lilacine and the spots are very small and differently placed.

Port Lincoln, South Australia; Melbourne, Victoria; two specimens in November.

21. TELESTO DONNYSSA, Hew.

(*Hesperilla donnyssa*, Hew. Male. Desc. Hesp., p. 39, n. 3, 1868; Butt. v. Hesp. and Cyclop, fig. 7, 1874; *A. and S.*, Vict. Butt., p. 102, 1893.)

Male and female, 33-40 mm. Head, palpi, antennæ, thorax, and abdomen dark golden-fuscous, palpi and thorax whitish beneath, thorax and abdomen clothed with yellowish hairs above, antennæ spotted with white beneath. Legs reddish-fuscous. Forewings elongate, triangular, costa almost straight, termen hardly rounded, oblique; dark golden-fuscous markings yellowish; a moderately large elongate-quadrate spot in posterior end of cell, anterior and posterior edges sinuate; a second, somewhat rounded, between veins 3 and 4 near base; a third, larger, just below second; a somewhat ovate spot above inner margin at two-thirds from base, absent in male, or faintly traceable; an oblique transverse series of 3 sub-costal spots at three-fourths from base; stigma, black, narrow, oblique, somewhat broken into spots from immediately above inner margin to base of vein 4; cilia golden-fuscous. Hindwings with termen rounded; color as in forewings; basal and inner marginal hairs long, orange; a moderate dull orange band in middle of wing, divided into 3 spots by intervening veins, upper spot quadrate, well developed, lower two obscure; cilia ochreous, with fuscous spots at extremities of veins. Under side of forewings dull fuscous, median third dark fuscous; inner margin light ochreous; markings of upper side, except stigma, reproduced; a suffused yellowish spot resting on vein 1 at two-

thirds from base; cilia as above. Hindwings beneath pale fleshy lilac, with 7 fuscous spots; sometimes centred with whitish; first in cell near posterior extremity; second considerably beneath costa, at two-thirds from base; the remaining 5 in a transverse row at two-thirds from base, and almost parallel to termen; inner margin broadly dull ochreous, gradually attenuated from base; cilia as in forewings.

This species, although subject to slight variation in the development of the spots of under side of forewings, may be recognised by the narrow sexual band and small orange patch on hindwings.

The larvæ, which feed on species of *Cladium*, are when full fed about 35 mm. in length, head oblong and large, greenish-brown with a conspicuous V-shaped mark, apex pointing towards the body; there are also brownish markings on the sides; the body is cylindrical, tapering slightly towards anal extremity, uniform dull green, slightly wrinkled and paler at each segment; a dark green dorsal line; anal flap punctuated with minute bristles. The chrysalis is moderately long, with rugose projection on anterior segment. Found between united leaves or stems, the larva first spinning a circular silken pad about an inch above, which prevents the leaves contracting and enclosing the insects; the larvæ are full fed in November, the pupal state lasting about a fortnight.

Ringwood, Victoria; Scottsdale and Deloraine, Tasmania; Katoomba and Sydney, New South Wales; Blackwood and Port Lincoln, South Australia; from November to January.

22. TELESTO CHAOSTOLA, Meyr.

(Trans. Linn. Soc., New South Wales, ii., p. 830, 1887.)

Male, 34 mm. Head, palpi, thorax and abdomen fuscous grey, palpi becoming whitish beneath, hairs of abdomen yellowish tinged. Antennæ black, annulated with white. Forewings elongate-triangular, costa nearly straight, termen rounded, somewhat oblique; dark ochreous-fuscous; basal hairs yellowish; a slender ochreous-whitish line immediately beneath costal edge on basal half (sometimes absent); spots light ochreous yellowish, thinly scaled; one in middle of disc, moderately large, sub-quadrate; a second, smaller and sub-oval, near beyond this in middle; 3 very small, adjacent, arranged in a transverse series beneath costa at three-fourths; 2 other similar spots obliquely beneath and beyond these; a black stigma from beyond first discal dot to three-fifths of inner margin; cilia grey-whitish, barred with fuscous, basal third

fuscous. Hindwings with termen rounded; dark fuscous; basal hairs yellowish; a longitudinal oblong ochreous-yellow blotch in middle of disc, surmounted by 3 or 4 cloudy yellowish spots touching it; cilia whitish, basal third dark fuscous.

Underside: Forewings dark fuscous, paler along inner margin, spots of upper side reproduced, but lighter in color; a triangular orange blotch extending beneath costa from near base to first spot; three additional yellowish spots beneath second discal spots, forming with it a transverse series; a cloudy grey-whitish patch along upper half of termen, narrowed at extremities and edged with dull purplish. Hindwings purplish fuscous, irregularly sprinkled with grey-whitish, dorsal half more grey-whitish, excepting near termen; a twice dentate dark purplish mark towards inner margin before middle; 8 indistinct moderate spots outlined with dark fuscous, one before and above middle, one smaller in middle, remaining 6 forming a series (lower 3 adjacent) parallel to termen at two-thirds; a series of obscure fuscous dots beyond.

Female, 36 mm. Color and markings as in male excepting stigma, the single post-cellular spot is somewhat more flattened than in male, and immediately below it are 2 rather larger spots, first sub-quadrate, second irregular cuneiform.

Allied to the preceding species, but very distinct by the larger number of spots on forewings, besides other differences.

Blackheath, New South Wales; one male specimen taken by Mr. G. H. Raynor in November; Huonville, Tasmania; one female specimen taken by Mr. J. R. Norman in December.

23. TELESTO ANDERSONI, Kirby.

(Ann. Mag., N.H., vi., p. 434, 1893; *A. and S.*, Vict. Butt., p. 118, 1893.)

Male and female, 28-30 mm. Head, palpi, thorax, antennæ, and abdomen dark ochreous-fuscous, palpi beneath ochreous-whitish, antennæ annulated with whitish beneath, club reddish. Legs ochreous-fuscous. Forewings elongate-triangular, costa nearly straight, slightly arched near base, especially female, termen oblique, gently rounded; dark golden-fuscous, with yellowish markings; basal hairs orange; a large elongate spot in cell, occupying posterior half, strongly sinuate above; two somewhat quadrate spots beyond end of cell, upper largest; an erect, moderate black stigma, from immediately before last mentioned spots to inner margin at two-thirds; an oblique series of 3 sub-apical spots beyond three-fourths of costa; cilia dark fuscous, with a blackish hind-marginal line.

Hindwings with termen rounded; color as in forewings; basal and inner marginal hairs orange; an elongate median patch of yellowish scales, reaching from base to beyond two-thirds of wing, brightest on upper edge; cilia orange yellow.

Underside of wings purplish-fuscous, markings of forewings reproduced, excepting stigma; basal two-thirds of cell filled with orange; markings more or less edged with dark fuscous; cilia as above. Hindwings with two obscure parallel series of transverse fuscous dots in middle, not reaching either margin; cilia dull ochreous, with a few blackish spots at base.

Female, 30-32 mm. Color as in male, but markings of forewings golden-yellow, post cellular pair larger, spot in cell less elongate, patch of yellow on hindwings more pronounced.

This species could at first sight be easily confused with *Chaostola*, Meyr., but the absence of the two extra spots beyond the post-cellular pair is a definite and reliable distinction, besides which *Chaostola* has only one post-cellular spot in the male, but three large ones in the female.

Dandenong Ranges and Poowong, Victoria; in December and January.

24. TELESTO DISPAR, Kirby.

(Ann. Mag., N.H., vi., p. 436, 1893; *Trapezites dispar*, A. and S., Vict. Butt., p. 117, 1893.)

Male, 40 mm. Head, thorax, and abdomen golden-ochreous, more or less clothed with greenish-ochreous hairs; thorax and abdomen beneath clothed with whitish hairs. Palpi blackish. Antennæ black, annulated with white beneath, club reddish-carmine beneath. Legs reddish-fuscous. Forewings elongate-triangular, costa nearly straight, termen gently bowed, oblique; ochreous-fuscous, with somewhat golden reflections; markings golden-metallic; a large elongate-ovate spot in posterior end of cell, somewhat indented in middle above; a moderate, somewhat quadrate spot beyond lower extremity of first spot, sometimes surmounted by 2 or 3 small additional spots, but these are generally absent; stigma narrow, black, more or less broken into 5 or 6 elongate spots, from inner margin at two-thirds, terminating between quadrate and ovate spots; cilia dark fuscous. Hindwings with termen rounded, color as in forewings; base and inner margin clothed with greenish-ochreous hairs; an elongate patch of dull orange in middle of wing, not near reaching termen; cilia reddish-ochreous, mixed with fuscous at base. Under side of forewings reddish-ochreous, upper margin of cell narrowly orange throughout, large cellular spot of upper side reproduced, and

edged posteriorly with blackish, which color is continued obliquely to inner margin and basal area of wing; a large golden-orange quadrate spot between veins 4 and 5; a second, larger, immediately below; a third, somewhat paler and much narrower below second; a very elongate yellowish blotch immediately below, extending to termen; a second, just below, more or less suffused anteriorly; a very small whitish spot between veins 7 and 8, blackish edged; cilia reddish-fuscous, mixed with blackish, darker around inner margin. Hindwings and cilia reddish-ochreous, without markings.

A large and distinct species not nearly approaching any other in general appearance. The species known as *Idothea*, Miskin, is considered by some to be the female of the present species, *vide* Kirby, Ann. Mag., N.H., vi., 436, 1893, which is not improbable, but in the absence of authentic information we prefer to keep them separate at present.

Hobart, Tasmania; Grampians, Wandin, and Macedon, Victoria; in December and January.

25. TELESTO IDOTHEA, Misk.

(Proc. Roy. Soc., Queensland, p. 152, 1889; *A. and S.*, Vict. Butt., p. 116, 1893.)

Female, 40 mm. Head, palpi, thorax, and abdomen dark fuscous, mixed with greenish-ochreous hairs, whitish-ochreous beneath. Antennæ dark fuscous, annulated with white beneath, club reddish beneath. Legs ochreous. Forewings elongate-triangular, costa gently arched, termen gently bowed, oblique; dark fuscous golden; markings golden, somewhat hyaline; basal hairs orange; a large irregularly quadrate spot in posterior end of cell, anterior edge with a faint tooth in middle, posteriorly slightly indented above middle; a cartridge-shaped post-cellular spot beyond and below, apex almost touching cellular spot; a second, elongate-quadrate immediately below; a third below middle of second, irregular-triangular; a fourth, somewhat ovoid, immediately below third, sometimes joined to third by 2 or 3 golden scales; an oblique transverse series of three quadrate sub-costal spots, lower largest; cilia fuscous, chequered with black. Hindwings with termen hardly waved; dark fuscous inclining to blackish; basal and inner marginal hairs greenish-yellow; a very large somewhat cuneiform patch of orange, from near base to two-thirds of wing, bounded by veins 2 and 6, much dilated posteriorly, posterior edge with 2 semi-circular excavations between veins 2 and 4; cilia reddish-ochreous, chequered with

black at extremities of veins. Under side of both wings reddish-ochreous, dorsal two-thirds of forewings blackish, not reaching inner margin above middle; cellular and first 2 post-cellular spots of upper side, reproduced; sub-costal spots hyaline, somewhat suffused and more or less edged with black; inner margin whitish-ochreous, except basal third, which is blackish; 2 lower post-cellular dots appear as elongate blotches of whitish-ochreous; some orange scales along upper margin of cell; cilia as above. Hindwings with markings black, comprised of 3 small dots, with indications of a fourth; first and second at two-thirds from base, between veins 2 and 4; third between veins 6 and 7 at two-thirds from base; fourth hardly traceable, preceding first; inner margin broadly dull white; cilia as above.

This insect is in all probability the female of the preceding species, a view shared by others than ourselves, but as the question is still in doubt it appears better to await further information before insisting on the point.

It is an attractive and easily recognised species, specially characterised by the large brilliant orange patch of hindwings.

The larva, which is similar to *Trapezites iacchus* in appearance, feeds on *Cladium*. The pupa is blackish, with rugose head.

Katoomba, New South Wales; Wandin and Healesville district, Victoria; two specimens in December.

26. TELESTO FLAMMEATA, Butler.

(A and M.N.H. (5), ix., p. 85, 1882; *T. eclipsis*, *Butl., l.c.*, p. 86, male; *Hesperilla atromacula*, *Misk.*, Proc. Roy. Soc. Queensland, p. 148, 1889.)

Male, 28-34 mm. Head, palpi, thorax, and abdomen dark fuscous, densely clothed with greenish hairs, beneath whitish-ochreous. Antennæ blackish, annulated with whitish, beneath more or less whitish throughout, club reddish above, whitish beneath. Legs dull reddish-ochreous. Forewings elongate-triangular, costa somewhat arched at base, faintly sinuate in middle, termen gently bowed, oblique; golden-ochreous, basal two-thirds of wing more or less clothed with dense orange hairs, somewhat curled in disc; markings yellowish; an irregular elongate spot in posterior end of cell; a second, similar, immediately beyond extremity of cell, between veins 3 and 4, beneath which is a very large rounded patch of velvety black; a small sub-apical spot between veins 6 and 7; a suffused blackish line along termen; cilia ochreous-fuscous, somewhat

chequered with blackish. Hindwings with termen somewhat waved; color as in forewings; base and inner margin more or less clothed with orange hairs; an elongate patch of orange above middle of wing, between veins 4 and 6, not reaching either margin; cilia ochreous. Under side of forewings ochreous, somewhat reddish tinged; costa from base to beyond middle yellowish, markings of upper side reproduced, somewhat hyaline; black patch absent; median third of wing dark fuscous, ground color becoming whitish-ochreous between vein 1 and inner margin; cilia as above. Hindwings with color as in forewings, 2 or 3 small suffused fuscous spots at end of cell; a curved series of about 6 similar spots at two-thirds from base, between veins 1 and 7; cilia as above.

Female, 28 mm. Head, palpi, thorax, and abdomen blackish, more or less clothed with greenish-ochreous hairs, beneath as in male. Legs and antennæ as in male. Forewings as in male, but termen more bowed; ochreous-fuscous, more or less wholly irrorated with purple reflections; basal hairs yellowish wholly irrorated with purple reflections; basal hairs yellowish; markings golden; a large roundish spot in posterior end of cell; a cartridge-shaped spot immediately below and beyond, between veins 3 and 4; a similar, but larger spot immediately below, separated from above by vein 3; an oblique transverse row of 3 sub-costal spots, at about two-thirds from base, lower largest; cilia ochreous, with blackish points at extremities of veins. Hindwings with shape, color, markings, and cilia as in male. Forewings beneath with color as in male; markings of upper side reproduced, but color dull ochreous. Hindwings beneath with color and markings as in male.

An easily recognised species, especially the male. The large black sexual blotch being a conspicuous character.

Healesville, Lake Tyers, Gisborne, Wandin, and Powong, Victoria; Como, New South Wales; in January and February.

27. TELESTO TYMBOPHORA, n. sp.

Male, 30 mm. Head, palpi, antennæ, thorax, legs, and abdomen dark fuscous, palpi dull whitish beneath, thorax and abdomen more or less clothed with ochreous hairs. Forewings elongate, triangular, termen gently bowed, oblique; dark fuscous, clothed with scattered golden-ochreous hairs; basal hairs ochreous, sparse; a very small hyaline dot at base of veins 6 and 7; stigma large, roundish, just above vein 1 in middle; cilia ochreous. Hindwings with termen faintly sinuate before anal angle; color and cilia as in forewings; basal and inner marginal hairs dull golden-ochreous.

Under side of both wings dull fuscous, more or less sprinkled with yellowish, so as to appear ochreous-fuscous; dot of upper side of forewings reproduced.

A curious and conspicuous species, closely allied to *Flammeata*. We once thought it might be an aberrant form of that species, but having seen several specimens, all similar, we have decided to name it.

Mount Kembla, New South Wales; one specimen taken in December.

28. TELESTO ATRALBA, Tepp.

(*Hesperilla atralba*, Tepp. Trans. Roy. Soc., S.A., iv., p. 33, t. 2, f. 5, 1881; *Telesto dactyliota*, Meyr, Proc. Linn. Soc., N.S.W., p. 831, 1887.)

Male and female, 25-33 mm. Head, palpi, thorax, and abdomen fuscous grey, palpi whitish beneath, hairs of abdomen yellowish tinged. Antennæ black, slenderly annulated with white. Forewings with costa almost straight, termen rounded, almost oblique; rather dark fuscous, in male ochreous shining; basal third clothed with pale ochreous-yellowish hairs; spots pale whitish yellowish, thinly scaled, in male very small, in female moderate; first in middle of disc, transverse; second between veins 3 and 4 at base, roundish, in female with an additional larger spot adjacent to it beneath; three adjacent spots, arranged in a transverse series beneath costa at three-fourths; 2 others obliquely beneath and beyond; stigma in male, strong, blackish, from lower angle of first spot to beyond middle of inner margin; cilia grey-whitish, basal half barred with darker. Hindwings with termen rounded; ground color and cilia as in forewings, dorsal half clothed with pale ochreous yellowish hairs; a pale ochreous-yellowish cloudy longitudinal-oval discal blotch, beneath and beyond which are several very obscure cloudy pale ochreous-yellowish spots, in male tending to form a post-transverse series. Forewings beneath dark fuscous; an obscure, yellowish suffusion beneath costa on basal half; a triangular blotch suffused with whitish grey, occupying apical fourth of wing; spots as above, but in male with an additional spot beneath posterior discal spot, as in female. Hindwings beneath light grey, mixed with fuscous towards costa; spots round, outlined with dark fuscous; a very small one beneath costa at one-third; a similar one in disc before middle; two dot-like, before middle, towards inner margin; seven moderately large spots, placed as an acutely angulated post-median series.

Port Lincoln, Noarlunga, and Moonta, South Australia; Geraldton, Western Australia; in October and November.

29. TELESTO DOUBLEDAYI, Feld.

(Verh. Zool. Bot. Ges., xii., p. 491, n. 180, 1862; male, *Hesperilla dirphia*, H.S., nec. Hew., Stett. Ent. Zeit., p. 79, n. 61, Taf. iii., fig. 10, 1869; ? female, *Tel. Leachii*, Feld., Verh. Zool., Bot. Ges., xii., p. 491, n. 181, 1862; *A. and S.*, Vict. Butt., p. 126, 1893.)

Male and female, 28-30 mm. Head, palpi, antennæ, thorax, and abdomen dark fuscous, thorax, and abdomen clothed with greenish-yellow hairs, beneath whitish, antennæ spotted beneath with yellowish, club reddish above, whitish beneath. Forewings elongate, triangular, termen bowed, oblique; ochreous fuscous, with golden reflections; markings yellowish; an elongate spot in cell, extending from beyond middle to posterior extremity, where it is curved to upper edge of cell; much shorter in female; a quadrate spot above and beyond extremity of stigma; a second, smaller, just below, becoming very large in female; an oblique transverse row of 3 whitish spots beyond two-thirds from base; stigma dull fuscous, edged on either side narrowly with black, erect, somewhat waved, from immediately above inner margin at two-thirds to before lower post-cellular spot, cilia fuscous, mixed with whitish. Hindwings with termen hardly waved; color as in forewings; a large patch of dull yellow hairs, extending from base along inner margin to two-thirds, more dense in middle, but not forming definite markings; cilia yellowish, at base fuscous. Under side of forewings purplish-fuscous, markings of upper side reproduced; a moderately broad bluish white marginal streak, extending from middle of termen to apex; inner margin broadly fuscous-whitish throughout, cilia as above. Hindwings beneath purplish-fuscous, irrorated throughout with bluish white, except a submedian band of 5 contiguous moderate fuscous spots; cilia as above.

At once recognised by the rich coloring of under side of hindwings and curious cellular spot of male. We think that the insect figured in "Victorian Butterflies," p. 126, as *Hesperilla arsenia*, Plotz., represents the female of this species, as there are seven spots, not six, on upper side of *Arsenia*, male. There is an excellent figure of the male (figured as *Dirphia*, Hew.) in Stett. Ent. Zeit., taf. iii., fig. 10.

Gympie, Duaringa, Mackay, and Brisbane, Queensland; Como and Sydney, New South Wales; Healesville and Wandin, Victoria; from November to March.

30. TELESTO LEUCOSTIGMA, n. sp.

Male and female, 26-30 mm. Head, palpi, antennæ, thorax, legs, and abdomen golden-fuscous, antennæ faintly spotted with whitish, palpi beneath whitish, hairs of abdomen deep golden-ochreous. Forewings elongate, triangular, termen gently bowed, oblique; dark fuscous, finely sprinkled golden-ochreous; basal hairs golden-ochreous; markings semi-hyaline, faintly ochreous-tinged; a sickle-shaped spot, in female somewhat quadrate, in posterior extremity of cell sometimes almost obsolete in male; a transverse series of three sub-apical spots, sometimes absent in male; a quadrate spot at base of veins 3 and 4, and a smaller one immediately below; stigma white, moderately erect, faintly curved outwards at apex, entire, edged on either with black; cilia ochreous-fuscous. Hindwings with termen rounded; color as in forewings, but without markings; basal and inner marginal hairs long, golden-ochreous; cilia ochreous. Female with color as in male, but markings more yellowish and much enlarged; indications of a small spot on vein 1 beyond middle. Under side of forewings in both sexes fuscous, somewhat purplish tinged, becoming dull ochreous along posterior half of dorsum; markings of upper side except stigma, reproduced. Hindwings more reddish-purplish, with 2 faintly indicated transverse rows of fuscous spots.

Allied to *Doubledayi*, but differs from any other Australian species by the white stigma, which is a very distinctive character; the occasional absence of the sub-apical spots and of cellular spot are curious forms of variation.

Kuranda and Brisbane, Queensland; Mount Kembla, New South Wales; two specimens in October.

31. TELESTO ISMENE, Newm.

(*T. parvulus*, Plotz., Stett. Ent. Zeit., p. 378, 1884; *Telestos ismene*, Meyr., Ent. Mo. Mag., p. 82, 1885; *A. and S.*, Vict. But., p. 128, 1893; *Hesperilla humilis*, Misk, male, P.R. Soc., Queensland, p. 150, 1889.)

Male, 24 mm. Head, palpi, thorax, and abdomen dark fuscous, thorax and abdomen mixed with golden-ochreous hairs, palpi, thorax, and abdomen beneath whitish. Legs ochreous-whitish. Antennæ blackish, annulated with white, club blackish, apex reddish beneath. Forewings elongate-triangular, termen gently bowed; ochreous-fuscous, with golden reflections, basal third more or less clothed with short orange hairs; markings whitish; a narrow, somewhat 8-shaped spot

in posterior end of cell, rarely obsolete; a small roundish spot almost touching apex of stigma; an oblique transverse row of 3 small sub-costal spots, at about two-thirds from base, sometimes edged with fuscous; stigma hyaline, broadly edged with black on either side, from inner margin just beyond middle, somewhat curved outwards so as to nearly touch post-cellular spot, anteriorly twice indented, much constricted below middle; cilia greyish-fuscous, with blackish points at extremities of veins. Hindwings with termen hardly waved; dark fuscous, with golden reflections, hairs on base and inner margin somewhat ochreous; cilia as in forewings. Under side of forewings fulvous, markings of upper side, except stigma, reproduced; a dull whitish patch above anal angle. Hindwings with a transverse sub-median band of about six indistinct contiguous reddish-ochreous spots; cilia as above.

Female, 26-30 mm. With coloring as in male, 8-shaped, post-cellular and sub-costal spots as in male, beneath post-cellular spot is a larger spot, slightly and obliquely beyond; a smaller spot below this, and indications of another between the two last-mentioned; cilia as in male. Under side of both wings as in male, markings of forewings reproduced, excepting the two spots below second post-cellular spot; transverse band of hindwings more pronounced than in male.

Closely allied to *Doubledayi*, Feld. The male is best distinguished by the cellular spot, which in the present species is somewhat obscured but well developed and large in *Doubledayi*. The female is much more similar, but the additional post-cellular spots and coloring of hindwings are efficient characters to distinguish it from that species.

Healesville, Nar-Nar-Goon, Lake Tyers, Victoria; Brisbane, Mackay, and Duaringa, Queensland.

32. TELESTO SEXGUTTATA, Herr-Sch.

(Stett. Ent. Zeit., p. 80, n. 64, t. 3, fig. 16, 1869).

Male, 30 mm. Head, thorax, palpi, antennæ, and abdomen golden-ochreous. Forewings elongate-triangular, termen nearly straight, faintly sinuate on lower half; golden-ochreous, markings pale ochreous; a cartridge-shaped spot just above and beyond apex of stigma; a second, much smaller, somewhat triangular, immediately below; a third, more suffused below second, and a fourth, suffused resting on vein 1; an oblique transverse series of 3 (lower one more or less absent) sub-costal spots before apex; second largest; stigma narrow, waved.

oblique, entire, black; commencing at base of vein 5 and terminating on vein 1 near fourth spot; cilia pale ochreous, with a dark line at base. Hindwings with termen faintly waved; color and cilia as in forewings; a few ochreous hairs below cell. Under side of both wings pale ochreous; a broad dull fuscous sub-median streak on forewings; markings of upper side reproduced; a dull whitish elongate patch on inner margin near anal angle; cilia of both wings as above.

Female, 36 mm. Color and markings, except stigma, as in male, but spots larger, the fourth being conspicuous; the third is absent.

An easily recognised species; the absence of the third sub-costal spot is curious. A specimen in the Macleay Museum, probably referable to this species, has all the markings of forewings, except stigma, obscured, otherwise similar. Herrich-Schaeffer's figure is accurate; it represents the female.

Bowen, Queensland; two specimens, male and female, in Brisbane Museum collection.

33. TELESTO PERRONII, Latr.

(*Hesperia perronii*, Latr., Enc. Meth., ix., p. 763, n. 100, 1819; *Tel. perronii*, Bdv., Voy. Astr. Lep., p. 164, 1832; *T. Kochii*, Feld., Verh. Zool. Bot. Ges., xii., p. 491, n. 179, 1862; *Herrich-Schaff.*, Ent. Stett. Zeit., t. 3, fig. 12; *Hesperilla doclea*, Hew., Desc. Hesp., p. 39, n. 4, 1868; ? *Tel. arsenia*, Plotz., Stett. Ent. Zeit., xlv., 384, 1884.)

Male, 26-30 mm. Head, palpi, thorax, and abdomen dark fuscous, thorax and abdomen clothed with greenish-ochreous hairs, beneath whitish-ochreous. Antennæ dark fuscous, annulated beneath with ochreous-whitish, club reddish above, whitish ochreous beneath. Legs ochreous. Forewings elongate-triangular, termen gently bowed, oblique; ochreous-fuscous, with golden reflections; base of wing clothed with short dense yellowish hairs; markings whitish, somewhat hyaline; an elongate mark in posterior end of cell, posteriorly narrowly curved upwards so as to becoming somewhat sickle-shaped; a somewhat quadrate post-cellular dot, just beyond apex of stigma, indented above middle posteriorly; a small dot obliquely below; a transverse series of 3 small sub-costal spots, at about two-thirds from base; stigma black, broad, entire, oblique, extremities much narrower, from immediately above inner margin to just before first post-cellular quadrate spot; cilia whitish, basal half fuscous. Hindwings with termen rounded; color as in forewings; basal two-thirds of inner margin clothed with long ochreous hairs; cilia as in forewings. Under side of forewings fulvous, becoming fus-

cous from below cell and towards lower half of termen; inner margin broadly fuscous-whitish; markings of upper side reproduced, but lower post-cellular spot much enlarged and somewhat cuneiform; cilia fuscous-fulvous. Hindwings fulvous; a few obscure spots of fuscous near base; a sub-median row of transverse fuscous spots; cilia as in forewings.

Female, 34 mm. Head, palpi, thorax, antennæ, legs, and abdomen as in male. Forewings with costa arched at base, termen bowed, oblique; ochreous-fuscous, somewhat tinged with purplish, basal one-third of wing clothed with short ochreous hairs; markings silvery-white; an irregularly eight-shaped spot at posterior end of cell, upper half much constricted, and almost obsolete in some specimens; a cartridge-shaped spot beyond lower extremity of cell; an elongate quadrate spot before and below it, separated by intervening vein; an oblique transverse row of 3 quadrate spots at two-thirds from base, median smallest; cilia as in male. Hindwings with termen rounded; color as in forewings, basal two-thirds of inner margin clothed with dull ochreous hairs. Under side of forewings dull ochreous-fuscous; markings of upper side reproduced; inner margin as in male. Hindwings with color as in forewings; sub-median series of dots as in male, but hardly traceable; cilia fuscous.

The male of this is easily recognised by the broad black stigma, which indicates the species with certainty; the female on the upper side is not unlike a large female specimen of *Doubledayi*, Newm. We have doubtfully quoted *Arsenia*, Plotz., as a synonym; possibly that species is identical with female of *Ismene*.

Larvæ full fed 25-30 mm. Head reddish-fuscous, mixed with blackish and becoming broadly blackish behind and on sides; V-shaped mark fuscous moderately indicated, body cylindrical, moderately thick throughout, hardly smooth; light fuscous, finely irrorated with blackish. (In the early stages it is fleshy-pink, without any traceable lines.) Dorsal well defined, moderate, black; spiracular, supra, and sub-spiracular dark fuscous, latter very faintly indicated, spiracles small, fuscous; anal segment paler than general ground color. Feeds on various grasses (? *Xerotes*, Sp.); also bred from larvæ feeding on *Cladium asperum*. Pupæ dark fuscous, shaped exactly as in *Trapezites iacchus*, Fab.

Sydney and Como, New South Wales; Ocean Grange, Victoria; Brisbane to Mackay, Queensland; from November to February, eleven specimens.

34. TELESTO COMPACTA, Butl.

(Male. A.M.N.H. (5), ix., p. 87, 1882; female, *Hesperilla scepticalis*, Rosen, *l.c.*, xvi., p. 379, t. 11, fig. 2, 1885; *A. and S.*, Vict. Butt., p. 127, 1893.)

Male, 25 mm. Head, palpi, thorax, and abdomen golden-ochreous, densely clothed with short greenish-ochreous hairs; beneath whitish. Antennæ dark fuscous, annulated beneath with ochreous, club with apical two-thirds reddish. Legs reddish-ochreous, anterior pair mixed with whitish. Forewings elongate-triangular, costa slightly arched at base, faintly sinuate in middle; termen bowed, oblique; dark golden-ochreous; markings yellowish-white; an elongate sub-crescentic mark in posterior end of cell, posterior extremity hardly reaching end of cell; a moderate roundish post-cellular spot above and beyond apex of stigma; an oblique transverse series of 3 somewhat quadrate sub-costal spots, at about two-thirds from base, median smallest; stigma short, black, somewhat broken into spots, obliquely placed, from considerably above inner margin towards anterior edge of post-cellular spot, but not near reaching it; cilia ochreous-reddish, mixed with blackish and with a dark fuscous terminal line. Hindwings with termen slightly waved; color as in forewings; base and inner margin clothed with greenish-ochreous hairs; markings yellowish-white; 2 very small roundish spots at one-third from base in middle; a transverse band of four cartridge-shaped spots at about two-thirds from base, upper one much smaller and touching second; cilia as in forewings. Under side of forewings yellowish-orange, dorsal half broadly blackish-fuscous; markings of upper side, except stigma, reproduced, but color more silvery, especially sub-costal spots. Hindwings reddish-ochreous; markings of upper side reproduced in silvery white, and more or less edged with dark fuscous; an additional similar and smaller spot lying between veins 7 and 8 near base; 2 very small spots, one above first spot of band; second, adjacent to fourth spot of band, the whole forming a band of six spots instead of four; cilia reddish-ochreous.

Female, 24-26 mm. Head, palpi, thorax, and abdomen dark fuscous, clothed with greenish-yellow hairs, beneath whitish, abdomen beneath fleshy-white. Legs reddish-ochreous. Antennæ dark fuscous, annulated above and below with white, club dark fuscous, beneath reddish. Forewings elongate-triangular, costa gently arched, termen bowed, oblique; dark golden-fuscous; basal area sparsely clothed with short ochreous hairs; markings whitish, semi-hyaline; a somewhat 8-shaped spot

in posterior end of cell, upper half constricted; a moderate cartridge-shaped post-cellular spot, considerably beyond first; a moderate quadrate spot below; a small triangular spot above inner margin, at about two-thirds, lying on vein 1; cilia reddish fuscous, base blackish. Hindwings with color as in forewings, termen rounded, basal and inner marginal areas more or less clothed with long orange hairs; a large yellowish, in male orange, elongate-quadrate spot in middle of wing, immediately below posterior extremity of cell; two small, suffused, somewhat cuneiform yellowish spots, parallel to this, second hardly perceptible on account of density of inner marginal hairs; cilia as in forewings. Underside of forewings with costal half orange-ferruginous, dorsal half more or less dark fuscous; a narrow streak whitish-lilac, from apex along termen to above anal angle; markings of upper side reproduced; cilia ochreous-ferruginous. Hindwings with color as in forewings, lilacine streak continued as a band for whole length of termen, and edged above by its own width of dark ferruginous, on upper extremity of which is a series of suffused blackish, white-centred small spots; markings of upper side reproduced in obscure ochreous-white; two or three suffused similar dots between posterior extremity of cell and base; cilia as in forewings.

The male of this species stands conspicuously distinct by the hyaline markings of hindwings, and approaches no other described species from Australia; the female is a totally dissimilar looking insect, and was until recently considered a distinct; in fact, Watson (P.Z.S., 1893), stated that they constituted distinct genera, but Mr. Waterhouse has taken them frequently *in cop.* which is decisive. The under side of this sex is not unlike the female. *Trapezites maheta*, Hew. Mr. Miskin has re-described (P.R. Soc., Queensland, p. 149, 1889) what he considers the male of this species, and from the description it evidently pertains to this species, although no mention is made of the stigma being present.

Sydney, Newcastle, and Katoomba, New South Wales; Gisborne, Macedon, Wandin, Pakenham, Ferntree Gully, and Sale, Victoria; four specimens from February to April.

Mr. Miskin records it from Port Darwin.

35. TELESTO SENTA, Misk.

(Female. *Hesperilla senta*, Misk., Ann., Q'nd. Mus. Supp., 1891.)

Male, 28 mm. Head, thorax, palpi, and abdomen dark fuscous, abdomen ringed with whitish, palpi, and thorax beneath ochreous-whitish. Antennæ dark fuscous, spotted beneath

with whitish, club reddish. Legs dark fuscous, yellowish tinged. Forewings elongate-triangular, costa faintly sinuate in middle, termen hardly rounded, oblique; dark golden-fuscous; markings silvery white; an irregular quadrate spot in posterior end of cell, strongly indented anteriorly and posteriorly, lower edge somewhat elongate; a dull ovoid spot immediately below; stigma narrow, entire, oblique, somewhat whitish, edged posteriorly by a narrow black line, from two-thirds of inner margin to base of veins 4 and 5; a somewhat cartridge-shaped spot touching its apex; a small spot immediately below preceding spot; an oblique transverse row of 3 cartridge-shaped sub-costal spots at two-thirds from base, median smallest; cilia dark fuscous-whitish. Hindwings with termen rounded; color and cilia as in forewings; a moderate ovate whitish spot at two-thirds from base, between veins 6 and 7; a similar spot at two-thirds from base, between veins 3 and 4. Under side of forewings dark fuscous, markings of upper side, excepting stigma reproduced; cell with some orange scales; 3 irregular suffused ochreous patches between inner margin and cell, hardly forming definite markings. Hindwings with color as in forewings; inner margin broadly irrorated with yellowish scales; markings whitish more or less edged with fuscous; a very obscure spot at base of veins 7 and 8; a second in end of cell, moderate, roundish; a third between veins 7 and 8 at two-thirds from base; a fourth, ovate, largest, immediately below; and two others, similar and parallel, between veins 2 and 4; an obscure row of small parallel whitish dots before termen.

Female, 31 mm., with color and markings as in male, but forewings with an additional sub-costal spot, large quadrate spot resting on vein 1 in middle, and the other spots much enlarged, especially that between veins 2 and 3. Hindwings: a large spot at posterior extremity of cell and a curved row of six hyaline spots before and parallel to termen, apical one the largest. Under side as in male.

Nearest *Croceus*, Misk., but very distinct and easily recognised by the number and arrangement of spots on upper side of hindwings.

Cooktown and Cairns, Queensland; two specimens in November.

The type (female) is in the Brisbane Museum.

36. TELESTO CROCEUS, Misk.

(Male. *Hesperilla croceus*, Misk., Proc. Roy. Soc., Q'd, p. 150, 1889; female, *l.c. nec.*, *Croceus*.)

Male and female, 30-36 mm. Head, palpi, antennæ, thorax, legs, and abdomen dark ochreous-fuscous, palpi beneath whitish-ochreous, thorax clothed with yellowish hairs, abdomen ringed obscurely with whitish-ochreous. Forewings elongate, triangular, costa nearly straight, termen gently bowed, oblique; dark ochreous-fuscous, basal half of wing, especially in male, clothed with dense golden-ochreous hairs; markings pale ochreous; a transverse spot in posterior end of cell, in male elongate and continued along lower margin of cell to near middle, appearing somewhat sickle-shaped; an oblique transverse series of 3 sub-costal spots at three-fourths from base, median smallest; a small quadrate spot between veins 3 and 4 near base; another immediately below, between veins 2 and 3; in male elongate, narrow, in female large and cart-ridge-shaped; stigma black, erect, narrow, somewhat broken into spots, from immediately above inner margin at two-thirds to base of veins 3 and 4; cilia fuscous, becoming ochreous around anal angle. Hindwings with termen rounded, faintly sinuate before anal angle, color and basal hairs as in forewings, but yellow hairs mixed with scales and extending to beyond three-fourths of wing; 2 round whitish ochreous spots, separated by intervening vein, in middle of wing at two-thirds from base; cilia ochreous, fuscous at base. Under side of both wings fuscous, densely irrorated with orange-yellow scales, so as to appear orange-eyellow; markings of upperside, except stigma, reproduced; inner margin broadly whitish-ochreous throughout, more pronounced in female; markings of hindwings reproduced; cilia brighter than above.

Nearest *Xanthomera*, but differs by presence of spots on hindwings. Mr. Miskin, in describing the species, stated that the female had no spots on hindwings, but the insect which he mistook for the female of this species is the following species. The female *Croceus* has spots on hindwings similar to male, though sometimes obscured, and at first sight bears a close resemblance on upper side to *Trapezites tasmanicus*, Misk.

Brisbane, Cooktown, Cairns, and Townsville, Queensland; in October and November.

37. TELESTO XANTHOMERA, n. sp.

Male 30, female 36 mm. Head, palpi, antennæ, thorax, legs and abdomen dark fuscous, palpi whitish beneath, abdomen ringed with whitish, thorax clothed with yellowish hairs. Forewings elongate, triangular, costa faintly arched near base,

thence straight, termen gently bowed, oblique; ochreous-fuscous, with pale yellowish markings; basal hairs yellowish; stigma black, erect, edged with darker, entire, anteriorly dentate; from inner margin to base of veins 3 and 4; a large spot in end of cell, anteriorly indented above middle; in male becoming elongate on lower half; a second, somewhat cuneiform, lying at base of veins 3 and 4; a third, cartridge-shaped, immediately below; a fourth, ovoid, just below cellular spot, touching third, and sometimes confluent with it; a fifth, suffused, quadrate, lying on middle of vein 1; an oblique transverse series of 3 quadrate sub-costal spots at two-thirds from base; cilia ochreous-fuscous, barred with dark fuscous. Hindwings with termen rounded; color as in forewings; basal hairs yellowish; an elongate, moderate patch of dull yellowish-orange scales in middle of disc; cilia whitish; barred with fuscous. Under side of both wings fuscous, densely irrorated with yellow scales, so as to appear yellow; markings of upper side faintly reproduced; lower portion of cell blackish; a faint blackish suffusion beyond post-cellular spots; hindwings without markings.

Somewhat allied to the preceding, but easily separated by the absence of markings on hindwings above and below.

In one female specimen there are thirteen veins in forewing, caused by the stalking of vein 3. It occurs in one wing only.

Brisbane and Cairns, Queensland; two specimens in March and September. We have also seen specimens taken in Victoria and New South Wales.

38. TELESTO CRYPSIGRAMMA, n. sp.

Male, 26 mm. Head, palpi, thorax, and abdomen dark fuscous, mixed with ochreous, hairs beneath whitish. Antennæ blackish (broken). Legs fuscous, mixed with whitish. Forewings elongate-triangular, costa gently arched at base, termen rounded, oblique; golden-ochreous; markings whitish, an irregular mark in middle of cell, suffused; two roundish spots beyond apex of stigma, upper largest; an oblique transverse row of 3 sub-costal spots near apex, upper one hardly traceable; stigma black, entire, moderately thick, oblique, from above inner margin to posterior extremity of cell, anterior edge suffused, posterior edge well defined; cilia fuscous-whitish (imperfect). Hindwings with termen faintly waved; color as in forewings, sparsely clothed with golden-ochreous hairs towards base; cilia fuscous. Under side of forewings dull ochreous-fuscous; markings of upper side faintly reproduced, excepting

post-cellular spots, which are prominent and somewhat enlarged; a large roundish dull white blotch at anal angle; cilia as above. Hindwings with color and cilia as in forewings.

This insect, although not in the best of condition for description, indicates a species easily recognised by the paucity of markings, and somewhat unusual shape of stigma, which latter is similar to that of the male, *T. perronii*, Latr.

Two specimens; Herberton, Queensland, in November.

39. TELESTO BATHROPHORA, n. sp.

Male, 28 mm. Head, palpi, thorax, antennæ, and abdomen blackish-fuscous, palpi, head, and thorax mixed with golden-greenish hairs, antennæ beneath annulated with whitish, club whitish beneath, palpi and thorax whitish beneath. Legs golden-fuscous. Forewings elongate-triangular, costa gently arched at base, termen gently bowed, oblique; dark fuscous, with a greenish-golden sheen; without markings; stigma entire, moderate, whitish, oblique, edged on either side narrowly with blackish, from above vein one to posterior extremity of cell, anterior edge with a moderate projection in middle, posterior edge moderately straight; cilia dark fuscous. Hindwings with termen rounded; color and cilia as in forewings; without markings; a few golden-ochreous hairs towards base. Under side of both wings ochreous-fuscous; inner margin of forewings broadly dull-whitish; cilia of both wings as above.

Female, 30 mm. Head, palpi, antennæ, thorax, legs, and abdomen as in male. Forewings as in male, but termen more bowed; markings white; a somewhat quadrate spot between veins 4 and 5 near base; an oblique transverse series of 3 quadrate sub-costal spots, median smallest; cilia as in male. Hindwings with termen rounded; cilia as in male. Under side of forewings as in male, markings of upper side reproduced; cilia as above. Hindwings somewhat darker; an obscure transverse band of dull whitish scales, from beneath costa in middle, curved round towards middle of inner margin, and there lost in general ground color; fainter indications of a parallel series above termen; cilia as above.

A conspicuous and easily recognised species. Distinct from all the known Australian Congeners by the whitish stigma and absence of markings in male. We believe this is the insect that Mr. Miskin considered to be *Halyzia*, Hew.

Mackay and Duaringa, Queensland; three specimens in November and December.

7. *TRAPEZITES, Hüb.

Club of antennæ elongate, pointed, more or less bent. Palpi obliquely ascending or sub-parallel, terminal joint short, sub-conical. Posterior tibiæ with all spurs. Forewings in male without stigma; 5 parallel to 4 and 6, slightly nearer 6 at base. Hindwings with 5 obsolete.

Differs from *Telesto*, Boisd., by the absence of stigma in male. The species vary very little, with perhaps the exception of *Iacchus* and *Phigalia*. In the following tabulation it will be noticed that the under side of hindwings forms the chief characteristic. The male and female present no differences, with the exception of the termen of hindwings of the former, which are somewhat prominent at anal angle.

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|------------------------------------------------------------------------------------------------|-----|--------------------------|
| 1. Hindwings below fuscous, with a single black, white-centred spot | 41 | <i>Petalia</i> . |
| Hindwings below yellow, with similar spot and two additional above termen | 40 | <i>Heliomacula</i> . |
| 2. Hindwings below, with a sub-median transverse row of large, white, blackish-edged spots ... | 42 | <i>Symmomus</i> . |
| Hindwings below without such spots | 44 | <i>Maheta</i> , female. |
| 3. Hindwings below with 2 transverse series of roundish silvery spots | 44 | <i>Maheta</i> , male. |
| Hindwings below with elongate (one very elongate) silvery-white streaks | 46 | <i>Argenteo ornata</i> |
| 4. Hindwings above with a large triangular orange median patch, not cut by veins ... | 43 | <i>Croites</i> , female. |
| Hindwings above with transverse orange patch cut by veins ... | 5 | |
| 5. Hindwings below fulvous, with 5 small white spots, blackish edged | 42A | <i>Iacchus</i> . |
| Hindwings below lilacine without such spots | 6 | |
| 6. Forewings above with orange spot in cell edged on either side with black | 50 | <i>Phigalia</i> . |
| Forewings above with cellular spot not edged with blackish ... | 8 | |
| 7. Hindwings above with 2 small roundish white sub-median | | |

| | | |
|----------------------------------------------------------------------------------------------|----|--------------------|
| spots | 51 | <i>Tasmanicus.</i> |
| Hindwings without markings ... | 9 | |
| 8. Hindwings beneath yellow, with a single white, black-edged median spot | 45 | <i>Lutea.</i> |
| Hindwings beneath fuscous, with similar but more blackish spot | 1 | |
| 9. Hindwings beneath ochreous-fuscous, with 3 transverse series of white lunulate spots ... | 49 | <i>Gracilis.</i> |
| Hindwings beneath orange-fuscous, with only one row of spots... | 2 | |
| 10. Forewings beneath with a very large cuneiform black patch, markings of upper side absent | 47 | <i>Sphenosema.</i> |
| Forewings beneath similar, but spots of upper side more or less reproduced | 48 | <i>Paraphaes.</i> |

40. TRAPEZITES HETEROMACULA, n. sp.

Male, 36 mm. Head, thorax, and abdomen golden-ochreous, abdomen sparsely clothed with yellowish hairs, segmental margins narrowly whitish. Antennæ fuscous, faintly annulated with white, club ochreous beneath, reddish above. Palpi ochreous-yellow. Forewings elongate, triangular, terminally bowed, oblique; fuscous, mixed with yellowish; a narrow elongate bright orange streak along dorsum from base to middle, finely attenuated at base; a somewhat suffused roundish spot immediately above posterior extremity of this streak; a large golden hyaline elongate-quadrate spot at base of veins 3 and 4; a second, similarly colored, elongate-cartridge-shaped spot immediately above, almost lying base of veins 5 and 6; a third quadrate in posterior end of cell; a transverse series of three sub-apical cartridge-shaped spots; cilia fuscous, becoming ochreous-tinged around anal angle. Hindwings with terminally faintly sinuate before anal angle; color as in forewings, but cell darker; basal and dorsal hairs bright yellow; a rather short, moderate, irregularly edged, orange median band, posterior extremity extending to vein 6, anterior continued along cell towards base; cilia fuscous, becoming yellowish on terminal half. Under side of forewings bright yellowish; markings of upper side reproduced in pale whitish-ochreous. Hindwings with color as in forewings; band of upper side faintly reproduced; a moderately large black, white-centred median

spot; two small roundish, faintly fuscous edged whitish spots, lying midway between large spot and termen, cilia of both wings as above.

Appears to be intermediate in form between *Petalia*, Hew., and *Iacchus*, Fab., differing from the former by the brighter coloring and two additional spots on under side of hindwings, and from the latter by more abbreviated band of upper side of hindwings, and lesser number and position of spots on under side of hindwings.

Type in coll., Macleay Museum.

Endeavor River, Queensland; one specimen.

41. TRAPEZITES PETALIA, Hew.

(*Hesperilla petalia*, Hew., Descr. Hesp., p. 32, n. 25, 1868; *Herr-Schaff*, Stett. Ent. Zeit., t. 3, fig. 11, 1869; *Telesto megalopis*, Meyr., Trans. Linn. Soc., N.S.W., p. 832, 1887.)

Male and female, 28-32 mm. Head, palpi, antennæ, thorax, and abdomen dark fuscous, antennæ annulated with white beneath, palpi, thorax, and abdomen clothed with short ochreous hairs. Legs whitish. Forewings elongate-triangular, costa nearly straight, termen hardly rounded, oblique; golden-ochreous; markings semi-hyaline, dull golden; an irregularly eight-shaped spot in posterior end of cell; in female much enlarged and becoming somewhat quadrate; a cartridge-shaped post-cellular spot immediately beyond, indented posteriorly; a much larger, somewhat quadrate spot, immediately below, similarly indented; an irregular yellowish spot obliquely below; in female much larger, quadrate, and more whitish; inner margin from base to before two-thirds narrowly yellowish; an oblique transverse series of 3 elongate quadrate sub-costal spots, lower largest; cilia whitish-ochreous, basal half fuscous. Hindwings with termen rounded; color as in forewings; dorsal half of wing clothed with long yellowish hairs, excepting beneath yellowish patch; a moderate median yellowish patch, immediately beyond cell, anterior edge distinct, posterior edge somewhat suffused; cilia as in forewings. Under side of forewings dull ochreous, dorsal half dark fuscous, cell broadly blackish towards posterior extremity; markings of upper side reproduced; cilia as above. Hindwings grey-whitish; a large distinct round black spot slightly above middle of wing, suffusedly edged with dull yellowish; a small white (in female large) spot in centre of black spot; cilia grey-whitish.

Considerable confusion has arisen in the past in reference

to the correct identification of this species, it having until recently been confused with *Lutea*, Tepp., and *Iacchus*, Fab. At first sight it could easily be mistaken for the former, but the preponderance of yellowish markings on that insect, coloring of under side and longer forewings, separate the present species with certainty; from *Iacchus* it is easily separated by its smaller size, and especially by absence of small series of dots on under side of forewings.

Brisbane and Mackay, Queensland; Como, New South Wales; four specimens in March and November, appearing to frequent *Leptospermum*.

42. TRAPEZITES SYMMOMUS, Hb.

(Zutr. Ex. Schmett., f. 225, 226, 1823; *Matthew*, Trans. Ent. Soc., p. 183, 1888; *Staudinger*, Ex. Schmett, t. 100, 1888; *Telesto praxedes*, Plotz., Stett. Ent. Zeit., xlv., p. 378, 1884; *Trapezites symmopus*, A. and S., Vict. Butt., p. 114, 1893.)

Male and female, 44-56 mm. Head, palpi, thorax, antennæ, and abdomen dark fuscous; abdomen and thorax mixed with greenish hairs, becoming fulvous on thorax anteriorly, abdomen with yellow segmental rings, palpi beneath yellowish orange, thorax beneath golden fulvous, abdomen beneath reddish, club of antennæ beneath orange, apex reddish. Forewings elongate-triangular, costa gently arched, termen bowed, oblique; dark golden fuscous, markings golden, somewhat hyaline; a large quadrate spot in posterior end of cell; a moderate somewhat cartridge-shaped post-cellular spot, between veins 3 and 4; a large elongate spot immediately below, anterior extremity extending to beyond middle of quadrate spot in cell, anterior edge indented above middle; a small triangular spot immediately below anterior edge; an oblique transverse row of 3 quadrate sub-costal spots at two-thirds from base; basal third of wing clothed with short orange hairs; a moderate streak of orange along costa from base to end of cell; inner margin narrowly orange from base to before middle; an irregular quadrate spot of orange immediately above posterior extremity of last-mentioned streak; cilia dark fuscous, becoming orange around anal angle and lower fourth of termen. Hindwing with termen gently waved; dark fuscous, tinged with purplish; basal hairs orange; a broad transverse median band of orange, between veins 1 and 6, irregularly waved above and below, becoming narrower towards inner margin; cilia orange, becoming somewhat barred with fuscous at extremities of veins. Under side

of both wings reddish-ochreous. Forewings with markings of upper side reproduced, but triangular spot continued obliquely and narrowly to vein 1, color yellow, as is inner marginal spot; base of cell triangularly blackish; a dark fuscous line beyond the 3 sub-costal spots, gradually enlarging and becoming suddenly confluent over upper half of hindmarginal area of wing; cilia as above. Hindwing with markings white; a roundish spot strongly encircled with black; a spot at one-third of inner margin edged with black on lower portion only; a curved transverse row of 6 irregularly quadrate spots, edged with blackish, especially on upper margin; first between veins 1 and 2, largest; fourth and fifth smallest; sixth moderate, between veins 6 and 7; cilia orange, with faint fuscous bars at extremities of veins.

Larva full fed, 36-40 mm. Stout, cylindrical, tapering towards posterior segments, body rugose throughout. Head dark fuscous, becoming blackish posteriorly, usual V-shaped lines whitish, hardly meeting posteriorly, and edged with blackish on inner edges; face reddish-fuscous, body reddish-fuscous, minutely with blackish; dorsal line broad, blackish, not well developed except on edges, supra-spiracular similar; spiracular and sub-spiracular lighter fuscous, hardly traceable, spiracles small, blackish. Full fed in October. Feeds on *Xerotes longifolia* and *Cladium*. The pupa is sub-cylindrical, fuscous and spotted with blackish, the posterior segments are somewhat pointed.

Easily recognised by its large size and brilliant coloring.

Watson (P.L.S., 1893) spells the name *Symmonus*.

Mackay and Brisbane, Queensland; Frankston and Grampians, Victoria; Waverley and Como, New South Wales; five specimens November to April.

42A. TRAPEZITES IACCHUS, Fab.

(*Papilis iacchus*, Fabr., Syst. Ent., p. 532, n. 389, 1775; Don, Ins. New Holl., t. 31, fig. 1, 1805; *Boisd.* (*Steropsis iacchus*), Voy. Astr. Lep., p. 169, n. 3, 1832; *Trapezites eliena*, Hew., Desc. Hesp., p. 32, n. 24, 1868; *Hesperia maheta*, Misk. (nec., Hew.), Ann., Queensland Mus., p. 78, 1891; *T. iacchus*, A. and S., Vict. Butt., p. 115, 1893.)

Male and female, 34-38 mm. Head, palpi, thorax, and abdomen dark fuscous, clothed with pale greenish-yellow hairs, beneath pale yellowish. Antennæ fuscous, annulated with ochreous, posterior half beneath ochreous, apical half of club reddish beneath. Legs dull orange. Forewings elongate-

triangular, costa gently arched, termen bowed, oblique, varying from golden fuscous to dark fuscous; markings as in *Symmomus*, but triangular spot beneath elongate spot absent; cilia dark fuscous, terminal half yellowish, especially round anal angle. Hindwings with termen gently waved; color as in forewings; basal and inner marginal hairs orange; a transverse band of orange between veins 1 and 6, divided by veins into 4 spots, first narrow; second narrow, wedge-shaped; third similar, but smaller; fourth large, elongate-quadrate, reaching from end of cell to above inner margin, but not near reaching it; cilia as in forewings. Under side of both wings orange-fulvous, upper two-thirds of forewings blackish-fuscous, excepting a wedge-shaped streak of ground color along termen; markings of upper side reproduced; cilia as above. Hindwings with 5 black, white-centred spots; first large, in cell near posterior extremity; second, third, and fourth moderate, arranged in a curved series at two-thirds from base, between veins 1 and 4; fifth small, obscure, at about two-thirds from base, between veins 6 and 7; inner margin broadly pale yellowish; cilia dull orange.

Allied to the preceding, but apart from its much smaller size it can be chiefly distinguished from that species by the orange band of hindwings being divided into spots by intervening veins, whilst in *Symmomus* it is entire. It also differs by the fewer number of spots on under side of hindwings, which in *Symmomus* are 8 in number. In the present species there are but 5. Most authors quote *eliena*, Hew., as a synonym, but it is just possible in error, as we possess an insect certainly allied to *iacchus*, but quite distinct, but not in a fit condition for identification. Hewitson's description indicates a differently colored insect to *iacchus*.

Larvæ and pupæ are similar to *Symmomus* in appearance and habits. Feed on *Xerotes multiflora*, R. Br. (*Brownii*, F. v. M.), *Graminaceæ*; the imago are not uncommon on *Leptospermum* blossoms (*R. Illidge*).

Frankston, Macedon, Gisborne (*Lyell*), and Ocean Grange (*Wise*), Victoria; Waverley and Como, New South Wales; Duaringa, Brisbane, and Mackay, Queensland; Hobart and Deloraine, Tasmania; eleven specimens from October to January, most common in December.

43. TRAPEZITES CROITES, Hew.

(*Cyclopides croites*, Hew., Ex. Butt., v., fig. 14, 1874; *Astictopterus croites*, Misk., Ann. Queensland Mus., 78, 1891.)

Female, about 25 mm. Forewings dark fuscous, with yellow hairs towards base; an oblique yellow band before middle, not reaching costa or dorsum, posterior edge with double prominence above middle; a transverse-oblong yellow spot beneath costa at two-thirds, another beyond this between veins 4 and 6, and an irregular band at two-thirds from vein 4 to near dorsum; cilia pale yellowish, spotted with dark fuscous. Hindwings dark fuscous, with a large irregular well-defined yellow patch in disc; cilia as in forewings. Under side of forewings as above, but with ochreous-whitish apical patch. Hindwings fuscous, almost wholly suffused with ochreous-whitish; discal patch and a dorsal streak dilated to tornus, cream color.

The specimen being a female, the genus is doubtful. Described from the type which is probably unique, in British Museum.

Western Australia.

44. TRAPEZITES MAHETA, Hew.

(Male. *Hesperia maheta*, Hew., Ann. N. H. (4), xix., p. 80, 1877; *Trapezites iacchus*, Misk. (nec. Hew.), Ann. Queensland Mus., 78, 1891.)

Male and female, 30-38 mm. Head, palpi, thorax, and abdomen dark fuscous, thorax and abdomen mixed with ochreous hairs, whitish beneath, antennæ dark fuscous, annulated with white beneath, club ochreous-whitish, apical half reddish beneath. Legs reddish fuscous. Forewings elongate-triangular, costa gently arched, termen gently bowed, oblique, faintly sinuate above anal angle; dark fuscous, with golden reflections; basal hairs yellowish, a yellowish sub-costal streak, suffused, from base to before middle; markings golden, somewhat hyaline; an irregular quadrate spot in posterior of cell, anterior edge constricted above middle, causing lower half to project somewhat, posterior edge faintly sinuate; a small somewhat quadrate spot considerably beyond, lying between veins 3 and 4 near base; a large cartridge-shaped spot lying just below, anterior edge from beyond middle of cellular spot, posterior edge to below middle of quadrate spot; an oblique transverse row of 3 somewhat roundish sub-costal spots at two-thirds from base; a somewhat moderate pentagonal spot of whitish-ochreous, below anterior edge of cartridge-shaped spot; inner margin narrowly yellow from base to beyond middle; cilia dark fuscous. Hindwings with termen rounded, somewhat prominent at anal angle; dark fuscous, somewhat purplish tinged; basal and inner marginal hairs long, yellowish-green; a mode-

rate, broad, transverse post-median band of yellow, at two-thirds from base, bounded by veins 1 to 6, edges more or less emarginate; cilia whitish suffusedly barred with fuscous at extremities of veins. Under side of both wings reddish-ochreous, somewhat tinged with flesh color; markings of upper side reproduced in pale yellow-whitish; upper margin of cell more or less yellowish, dorsal two-thirds of wing, excepting middle third of termen fuscous. Hindwings with 7 silvery-metallic spots, edged with fuscous; first largest, lying at base of cell, irregular-quadrate; second, somewhat pyriform, parallel and anterior to first; third moderate, at two-thirds from base, lying between veins 1 and 2; fourth small, immediately beyond; fifth smallest, just beyond fourth; sixth small, elongate, at two-thirds from base, lying between veins 6 and 7, and surmounted by a small fuscous dot; 2 very small spots parallel to fifth; yellow band of upper side somewhat reproduced in fleshy-ochreous; inner margin and anal angle dark fuscous; cilia as above.

This species stands in some collections as *Phigalia*, Hew., and although superficially somewhat similar it differs principally from that species by the color and markings of under side of hindwings, the color of *Maheta* being fleshy, whilst in *Phigalia* it is whitish, with a lilacine tinge. The silvery markings of under side of hindwings of male are a good distinction; the markings of upper side of forewings are much more abbreviated than in *Phigalia*; the base of wing is very scantily clothed with hairs; in *Phigalia* they are dense. The orange band of hindwings is narrower and extends much nearer to inner margin than in the other species mentioned. It is just possible that the insect figured on page 119, "Victorian Butterflies," is intended for the male of *Maheta*, although it is named *Phigalia*.

Brisbane and Mackay, Queensland; Waverley and Bathurst, New South Wales; five specimens from December to April.

45. TRAPEZITES LUTEA, Tepp.

(*Hesperilla lutea*, Tepp., Trans. Roy. Soc., S.A., iv., p. 33, t. 2, f. 6, 1877; *Trapezites petalia*, Misk. (nec. Tepp.), Ann. Queensland Mus., 79, 1891.)

Male and female, 30-40 mm. Head, thorax, palpi, and abdomen dark fuscous, clothed with greenish yellow hairs, beneath yellowish-white. Antennæ dark fuscous, annulated beneath with white, club yellowish-white beneath, apical half reddish. Legs yellowish-white. Forewings elongate-triangular, costa

gently arched, termen gently bowed, oblique; ochreous-fuscous, golden tinged; basal two-thirds of wing clothed with short, dense, greenish-yellow hairs; markings pale yellow, opaque; an irregularly shaped spot in posterior end of cell; a second considerably beyond, hardly below; a much larger somewhat roundish spot obliquely before and below second; a fourth somewhat suffused, considerably before and below third; an oblique transverse series of 3 somewhat ovate sub-costal spots at two-thirds from base, median largest; cilia dark fuscous, becoming whitish at tips and around anal angle. Hindwings with termen rounded, color as in forewings; a large patch of long yellowish-green hairs from base along inner margin, occupying two-thirds of wing, on posterior extremity between inner margin and vein 4, the hairs appear to form 3 elongate streaks, separated by intervening veins; an elongate-quadrate patch of pale yellow at two-thirds from base, parallel to upper elongate streak of hair; cilia pale yellowish-white. Under side of both wings yellow; markings of upper side of forewings reproduced in pale yellowish-white, excepting sub-costal spots, which are hardly traceable; dorsal two-thirds of wing dark fuscous, excepting median third of termen; cilia whitish. Hindwings with a moderately large silvery-white roundish spot at end of cell, edged with black; cilia as in forewings.

Not unlike *Petalia*, Hew., but the preponderance of yellow above and below affords a ready test for recognition.

Stonyfell and Port Lincoln, South Australia; two specimens in November; also from Duaringa, Queensland; and Hobart, Tasmania.

46. TRAPEZITES ARGENTEO-ORNATA, Hew.

(*Cyclopides argenteo-ornatus*, Hew., Desc. Hesp., p. 41, n. 4, 1868; Ex. Butt., v., Cyc. and Hesp., fig. 18, 19, 1874; *Astictopterus argenteo-ornatus*, Misk., Ann. Queensland Mus., p. 79, 1891.)

Male and female, 30-36 mm. Head, antennæ, thorax, and abdomen dark golden-fuscous, post-orbital rims white, antennæ spotted with white beneath, club blackish, apex crimson, thorax and abdomen clothed with yellowish hairs. Palpi yellowish-white. Legs ochreous-white. Forewings elongate, triangular, costa slightly arched at base, thence straight, termen oblique, faintly rounded; dark fuscous; basal hairs dense, appressed, orange-ferruginous; markings yellowish-orange; a moderate, in male small, irregular quadrate spot in posterior end of cell; a second, quadrate, midway between first spot and termen; a third, similar, below and considerably before second;

a fourth, largest, considerably above inner margin in middle; an oblique transverse series of 3 quadrate sub-costal spots at two-thirds from base; cilia fuscous, chequered with whitish. Hindwings with termen rounded, hardly prominent at apex; color as in forewings; basal and inner marginal hairs golden-ochreous; an elongate bright orange patch below middle of wing, nearer to costa than in inner margin; cilia as in forewings, but more whitish, especially round anal angle. Under side of forewings dark fuscous; costa with a moderately thick streak of yellowish, from base to apex, becoming blotch-like at apex and upper half of termen; markings of upper side reproduced, sub-costal spots almost white; cilia as above. Hindwings beneath fuscous-yellowish; markings metallic-silvery, edged with blackish; yellow post-median patch reproduced, but color yellow; a narrow elongate streak below costa, close to base; a second, similar, but smaller, below costa in middle; a third, somewhat diamond-shaped below costa before apex; a fourth in cell, elongate, narrowed, and slightly curved on upper third; a fifth, elongate, lying on vein 1 at one-third from base; a transverse row of 4 roundish spots at two-thirds from base, commencing at vein 1 and ending at lower extremity of yellow patch; inner margin broadly dull yellowish; cilia as in forewings.

Exceptionally distinct by the elongate silvery-metallic markings on under side of hindwings.

Perth and Fremantle, Western Australia; in October and November.

47. TRAPEZITES SPHENOSEMA, n. sp.

Female, 34 mm. Head, palpi, antennæ, thorax, legs, and abdomen dark fuscous, palpi beneath ochreous-whitish, antennæ annulated with whitish. Head and thorax clothed with golden-ochreous hairs, abdominal margins dull whitish. Forewings elongate-triangular, termen gently bowed, oblique; dark fuscous; basal half of wing clothed with short golden-ochreous hairs; markings obscure, dull ochreous; a small double spot in posterior extremity of cell; a second at base of veins 3 and 4; a third immediately below second, and an oblique transverse series of three sub-apical ones; cilia ochreous. Hindwings with termen rounded; color and basal hairs as in forewings, but hairs longer and extended along dorsum; cilia as in forewings. Underside: Forewings ochreous; a very large cuneiform black patch occupying upper five-sixths of wing, its apex directed to base. Hindwings ochreous-yellowish; a faint reddish spot in posterior extremity of cell; a faint transverse

post-median series of similar but smaller spots; cilia pale ochreous.

In the absence of the male the correct generic position cannot be assured, but in all probability it is rightly referred.

The curious wedge-shaped mark on underside of forewings is distinctive.

Perth, Western Australia; one specimen in November. We have seen others from the same locality.

48. *TRAPEZITES PARAPHAES*, n. sp.

Female, 25 mm. Head, palpi, antennæ, thorax, legs, and abdomen dark fuscous, head and thorax clothed with moderately long yellowish hairs, antennæ spotted with white beneath, palpi whitish beneath. Forewings elongate-triangular, termen gently bowed, oblique; dark fuscous, with ochreous markings; basal hairs ochreous; costal edge ochreous; a small quadrate spot in posterior extremity of cell; a second, similar, lying at base of veins 3 and 4; a third immediately below second, and a fourth resting on vein 1 at two-thirds from base; an oblique transverse series of three sub-apical spots, upper smallest; cilia ochreous. Hindwings with termen rounded; color cilia and basal hairs as in forewings, but basal hairs more dense and continued along dorsum. Under side: Forewings ochreous, markings of upper side, except spot on vein 1 reproduced; absent in some specimens; a large cuneiform black patch occupying upper five-sixths of wing, apex directed to base. Hindwings ochreous, somewhat tinged with reddish; two series (supra-median and sub-median) of obscure dull reddish spots; cilia of both wings as above.

Closely allied to the preceding, differing in its smaller size, coloring, and different shaped wings. The descriptions of this and the preceding read much alike, but the insects when placed side by side are quite distinct in appearance and easily separable.

Perth, Western Australia; one specimen received from Mr. Reid, taken in November. Mr. G. A. Waterhouse has a male specimen from King George's Sound. It differs only in the absence of spots on under side of forewings.

49. *TRAPEZITES GRACILIS*, Tepp.

(*Pamphila gracilis*, Tepp., Trans. Roy. Soc., S.A., iv., 34, t. 2, fig. 7, 1881.)

Male and female, 26-32 mm. Head, palpi, thorax, and abdomen dark fuscous, palpi and thorax clothed with greenish-

yellow hairs, abdominal segments narrowly whitish. Legs reddish fuscous. Antennæ dark fuscous, annulated with white, club dull reddish beneath. Forewings elongate-triangular, costa slightly arched at base, termen slightly bowed, oblique; dark golden-fuscous, with white markings; a somewhat reniform spot at end of cell; an outwardly curved series of five quadrate sub-costal spots, from beneath costa at two-thirds, curved round to meet another series of four similar spots which terminate above inner margin at two-thirds, fifth spot of upper series smallest, second spot of lower series largest; cilia fuscous, chequered with white. Hindwings with termen rounded; color and cilia as in forewings; basal and inner marginal hairs golden-fuscous. Under side of forewings dark fuscous, excepting a moderately broad streak of reddish-ochreous along costa and apical third of termen; markings of upper side not wholly reproduced, but in male all markings reproduced, excepting lower 2 of second series of spots; spots of first series white, accompanied by a parallel series of 4 triangular white spots near termen, anteriorly blackish edged; the last-mentioned series of spots are also visible in female; cellular and other markings dull ochreous, hardly traceable in female; cilia as above. Underside of hindwings fulvous; markings white; an elongate cuneiform spot, from base to beyond middle of cell, dilated posteriorly; a narrow elongate spot lying above and beyond posterior extremity of first; a third, small, considerably beyond second; a fourth, very large, quadrate, immediately below third, with an elongate projection on upper posterior edge; a fifth, quadrate, lying between veins 1 and 2; irregularly indented above and below; a curved series of 5 (sometimes 6) parallel spots, between veins 1 and 6, indented above and below; fourth spot twice indented and sometimes separated into 2 spots; all markings more or less edged with dark fuscous, excepting posterior edges of last-mentioned spots; cilia as in forewings.

Easily distinguished by the markings of forewings and separation of all markings of under side of hindwings. It may be identical with *Astictopterus cynone*, Hew. Hewitson's figure (Ex. Butt., v., f. 14, 1874) approaches it so closely as to admit of little doubt.

Semaphore and Henley Beach, South Australia; Gunbower, Victoria; several specimens taken in June and December.

50. TRAPEZITES PHIGALIA, Hew.

(*Hesperilla phigalia*, Hew., Desc. Hesp., p. 32, n. 23, 1868; Herr Schaff., Stett. Ent. Zeit., t. 3, fig. 15, 1869; *Telesto phlœa*,

Plotz., Stett. Ent. Zeit., xlv., p. 378 (? 1884); *Trapezites phillyra*, Misk., Proc. Roy. Soc., Queensland, p. 153, 1889; female, A. and S., Vict. Butt., p. 119, 1893.)

Male and female, 34-40 mm. Head, palpi, thorax, and abdomen dark fuscous, densely clothed with long greenish-yellow hairs, beneath whitish. Legs fuscous-whitish, all coxæ white. Antennæ fuscous, annulated with white above and below, club beneath whitish, apical half reddish. Forewings elongate-triangular, costa slightly arched at base, faintly sinuate in middle, termen hardly bowed, oblique; dark fuscous-golden; markings orange; basal half of wing more or less clothed with short dense orange-yellow hairs; an irregularly quadrate spot in posterior end of cell, deeply indented anteriorly and posteriorly, ground color on either side becoming black; a large, in male small, elongate quadrate spot, below first-mentioned spot, surmounted at its posterior apical extremity by a moderate quadrate spot; a very small spot below second spot, near anterior extremity; an irregularly shaped yellowish, somewhat opaque spot, above inner margin in middle, in female almost touching lower edge of second spot; an oblique transverse series of 3 roundish, white, subcostal spots, at two-thirds from base, median smallest; inner margin narrowly edged from base to beyond middle with short orange hairs; cilia dull whitish, chequered with fuscous, basal half wholly fuscous. Hindwings with color as in forewings, termen faintly waved, apex and anal angle somewhat prominent, more especially in male, base and inner margin broadly clothed with long orange hairs; median band, between veins 2 and 6, twice dentate below and once above, posterior half much dilated; cilia as in forewings. Underside of both wings fleshy-whitish, somewhat lilacine tinged; three subcostal spots reproduced as above, accompanied below and beyond by two small fuscous dots; cell of forewings orange, becoming confluent with quadrate spot of upperside, in female containing a suffused blackish quadrate spot in middle, in male much smaller and somewhat pointed; an irregularly shaped patch of blackish beyond end of cell; other spots of upperside reproduced, somewhat confluent and edged posteriorly by 3 elongate-quadrate spots, separated by intervening veins; a somewhat cuneiform blackish spot just below blackish spot in middle of cell; cilia dull whitish, chequered obscurely with fuscous. Hindwings marked with a series of small, roundish fuscous rings filled with ground color; first roundish, between veins 7 and 8, at one-third from base; second irregular in cell, diamond shaped

near posterior extremity; third, irregular shaped, between veins 7 and 8 at two-thirds from base; fourth, below and beyond, between veins 6 and 7; fifth, sixth, seventh, eighth, and ninth forming a slightly curved transverse row at two-thirds from base, between veins 1 and 6, posterior pair much smaller, ninth sometimes with an adjacent fuscous fleck; tenth, small, considerably above ninth, accompanied by a similar fleck; cilia as in forewings, but less chequered.

The larvæ, which is very similar in appearance to *Iacchus*, feed on *Cladium*.

Not unlike *Maheta*, Hew., but the differences between the two species will be found explained at the footnote in reference to that species.

Gisborne, Macedon, Toora, Dutson, and Wandin, Victoria; Sydney and Katoomba, New South Wales; Rockhampton (*Miskin*), Ithaca Creek (*Illidge*), Queensland; Blackwood and Highbury, South Australia; several specimens from September to March, November being the month when the species is commonest.

51. TRAPEZITES TASMANICUS, Misk.

(*Hesperilla tasmanicus*, Misk., female, Proc. Roy. Soc., Queensland, p. 149; *Telesto comma*, Kirby, Ann. Mag. N.H., vi., p. 436, 1893.)

Male and female, 26-28 mm. Head, palpi, thorax, and abdomen dark fuscous, more or less clothed with greenish-yellow hairs, beneath whitish. Antennæ dark fuscous, annulated with white, club reddish beneath. Legs whitish. Forewings elongate-triangular, costa somewhat sinuate in middle, termen faintly rounded, oblique; dark golden fuscous; basal third of wing clothed with short yellowish hairs; markings pale ochreous-white; a large irregular-shaped spot in posterior end of cell, constricted above and becoming somewhat elongate on lower edge; an elongate-quadrate spot midway between last-mentioned spot and termen, surmounted by a small roundish spot; an oblique transverse series of 3 small quadrate sub-costal spots at two-thirds from base, median smallest; indications of 2 small yellowish spots below cellular spot; cilia dull whitish, chequered with fuscous. Hindwings with termen rounded; color as in forewings; basal and inner marginal areas clothed with moderately long yellowish hairs; 2, rarely 3, conspicuous, moderate, roundish whitish spots below middle of wing, only separated by intervening veins. Under side of forewings dark fuscous; a large grey-whitish triangular patch, extending from 3 sub-costal spots to apex and continued

middle of termen; cell with a few orange hairs; markings of upper side reproduced, excepting yellowish spots; cellular spot edged with blackish; inner margin narrowly dull-whitish; cilia whitish, chequered with black. Hindwings fuscous, wholly irrorated with grey-whitish scales, excepting 2 transverse irregular rows of small fuscous dots, at one-third and two-thirds from base; spots of upper side reproduced and edged with blackish; cilia as in forewings.

Distinct by the markings on hindwings; a similar character occurs in *Telesto croceus*, Misk., but the smaller size, absence of stigma in male, and additional spots on forewings, easily separate it from that species.

Hobart, Tasmania; Gisborne, Healesville, Lilydale, and Gembrook district, Victoria; four specimens, from November to January.

8. *EXOMETÆCA, MEYR.

Club of antennæ elongate, pointed, bent. Palpi subporrect, terminal joint moderately long, pointed. Posterior tibiæ with all spurs. Forewings of male without stigma; 5 parallel to 4 and 6, slightly nearer 6 at base. Hindwings; 5 present, somewhat nearer 6 at base.

Contains only the single species, which has the facies of some species of *Trapezites*. The presence of vein 5 in hindwings is, however, a distinctive character.

52. EXOMETÆCA NYCTERIS, MEYR.

(Proc. Linn. Soc., N.S.W., ser. ii., p. 833, 1887).

Male, 27 mm. Head, palpi, thorax, and abdomen yellow-ochreous, palpi whitish on lower half, antennæ grey, club carmine above. Forewings elongate, triangular, costa nearly straight, termen hardly rounded, somewhat oblique; ochreous-fuscous, towards costa posteriorly tinged with darker fuscous; costal edge fuscous; a small dark fuscous longitudinal spot at base, near inner margin; a dark fuscous transverse linear mark in disc above middle; a cloudy fuscous dot beneath vein 2 before middle; 2 very small white spots, margined with dark fuscous, placed transversely in disc at two-thirds, upper between veins 3 and 4 at base; 2 dark fuscous dots placed transversely beneath lower of these; 3 very small white adjacent spots placed transversely beneath costa at three-fourths, margined posteriorly by a dark fuscous line, somewhat produced beneath; cilia fuscous, mixed with ochreous, becoming ochreous-yellowish towards anal angle. Hindwings with termen rounded; color as forewings, base more yellowish, costal

third wholly dark fuscous; a cloudy fuscous transverse mark in disc before middle; a curved transverse row of 5 very small cloudy dark fuscous spots at two-thirds, extending from near costa to below middle; cilia fuscous, mixed with ochreous. Under side of forewings fuscous, dorsal third pale whitish ochreous; white spots as above; a whitish transverse discal mark, margined with dark fuscous; a cloudy purplish blotch at three-fourths, reaching from costa two-thirds across wing, and enveloping the white spots. Hindwings beneath rather light fuscous, towards anal angle somewhat suffused with ochreous-whitish; a small, somewhat darker crescentic discal spot before middle; four very small darker fuscous spots arranged in a straight transverse series at two-thirds, one being above and 3 below middle.

Sits with wings projecting perpendicularly forward (as in a bat), so as to enclose the legs (*Meyrick*).

Albany, West Australia; one specimen, in December.

9. APAUSTUS, Hüb.

Club of antennæ rather short, hollowed, with short, abruptly narrowed point. Palpi ascending, terminal joint moderately long, slender, erect, pointed. Posterior tibiæ with all spurs. Forewings in male sometimes with stigma; 5 approximated to 4 towards base. Hindwings: 5 obsolete.

A genus of moderate extent, extending to Oriental region. The curious form of the antennæ is characteristic of the genus.

- | | |
|------------------------------------------------------------------------------------------------------------|------------------------|
| 1. Stigma of forewings absent | 3 |
| Stigma of forewings present | 2 |
| 2. Hindwings beneath ochreous-fuscous, with a white sub-median band ... | 53 <i>Papyria</i> . |
| Hindwings beneath ochreous, sub- median band, yellow | 54 <i>Flavovittata</i> |
| 3. Hindwings beneath bright ochreous, without markings, or faintly in- dicated | 55 <i>Lascivia</i> . |
| Hindwings beneath, light yellow to yellowish orange, markings of upper side moderately reproduced... | 56 <i>Sunias</i> . |

53. APAUSTUS POPYRIA, Boisd.

(*Hesperilla papyria*, Boisd., Voy. Astr. Lep., p. 166, 1832; *Taractrocera celæno*, Cox. Entomologist, iv., 402, 1873; *H. fumosa*, Guest, Trans. Roy. Soc., S.A., v., p. 37, 1882; *Apaustus minimus*, Misk., Proc. R. Soc., Queensland, p. 153, 1889; *Tarac-*

trocera papyria, A. and S., Vict. Butt., p. 129, 1893; *Apauustus alix*, Plotz., Stett. Ent. Zeit., p. 165, 1885.)

Male and female, 18-24 mm. Head, palpi, thorax, and abdomen dark fuscous, palpi beneath yellowish, thorax and abdomen clothed with yellowish hairs, beneath white, abdomen posteriorly sometimes ringed with whitish. Antennæ fuscous, spotted with white. Legs whitish. Forewings elongate, triangular, costa faintly sinuate in middle, termen gently bowed, oblique; dark fuscous, with orange-yellow markings; a narrow costal streak from base to before middle; a streak along lower margin of cell, continued right around to posterior extremity, where it becomes dilated and indented on either side, finely attenuated towards base; a narrow streak along inner margin from base to two-thirds, anteriorly attenuated and edged above throughout by a narrow dark fuscous streak; an oblique transverse row of somewhat quadrate, more or less connected, spots from just beneath costa at two-thirds, and curved round to two-thirds of inner margin, the 2 above middle placed considerably beyond the 3 sub-costal ones; in the male the lower two-thirds of series of spots become confluent, and appear as a thick streak, which is edged anteriorly by a narrow black stigma throughout; cilia dull whitish-fuscous. Hindwings with termen faintly sinuate in middle; color as in forewings; basal and inner marginal hairs yellowish; markings orange; a narrow elongate in cell near base; a moderate transverse series of irregularly edged quadrate confluent spots beyond middle of wing, not reaching either margin; cilia as in forewings. Under side of forewings dark fuscous; costa throughout and upper two-thirds of termen broadly orange yellow; markings of upper side, except stigma, reproduced, becoming whitish-ochreous; a sub-terminal streak of light fuscous. Hindwings dark fuscous, irrorated throughout with yellowish scales; markings of upper side reproduced, but color whitish; cilia as above.

Somewhat allied to *Lascivia*, Rosen, but immediately distinguished from that species by the markings of under side of hindwings, which in *Lascivia* are absent. Watson states (P.Z.S., 1893) that this is the only species possessing a stigma in male. This is erroneous, as *Flavovittata*, Latr., which is allied to *Papyria*, has a similar character, and we have two undetermined species of similar structure. The species described by Cox as *Celæno* undoubtedly refers to a slight variety of the present species, which does vary, but not to any appreciable extent.

The larvæ, which is of the usual yellowish-green Hesperid type, feed on *Imperata arundinacea*. It is similar in habits and appearance to *Lascivia* in both larval and pupal stages. The pupa is somewhat similar, but rather lighter fuscous, the posterior segments are covered with short bristles, above and below, the head has the anterior portion very rugose.

The imago frequent the blossoms of lucern (*Medicago sp.*).

Hobart, Tasmania; Parkside, Highbury, and Mount Lofty range, South Australia; Sydney and Como, New South Wales; Melbourne, Gisborne, &c., Victoria; Western Australia (*Miskin*); several specimens from November to March.

54. APAUSTUS FLAVOVITTATA, Latr.

(*Hesperilla flavovittata*, Latr., Enc. Meth., ix., p. 768, n. 114, 1819; *H. bifasciata*, Misk. (nec Tepp.), Ann., Queensland Mus., p. 81, 1891).

Male, 20 mm. Differs only from *Papyria* as follows: All the white markings of under side are changed to ochreous-yellow, and the band of hindwings is much shorter.

Perth, Western Australia; two specimens in November.

55. APAUSTUS LASCIVIA, Rosen.

(*Pamphila lascivia*, Rosen., Ann. N.H. (5), xvi., p. 378, t. 11, fig. 1, 1885; *Apaustus lascivia*, A. and S., Vict. Butt., p. 113, 1893.)

Male and female, 17-25 mm. Head, palpi, thorax, and abdomen dark fuscous, palpi beneath yellowish, thorax and abdomen densely clothed with long yellowish hairs. Antennæ fuscous, spotted beneath with yellowish, club blackish, basal two-thirds yellowish. Legs whitish, tibiæ and tarsi yellowish. Forewings elongate, triangular, costa nearly straight, termen obliquely rounded; dark fuscous; basal half of wing in male more or less minutely irrorated with yellowish, in the female the irroration extends along costa to apex; markings orange; a moderately thick streak along costa from base to middle, posteriorly cut by intervening veins; an elongate streak along lower margin of cell and continued right around posterior extremity, anteriorly attenuated; an oblique transverse row of 5 or 6 (generally 5) more or less quadrate spots, in male separated by veins, in female inclining to coalesce, from considerably below apex to above two-thirds of inner margin; a suffused spot below costa between extremity of costal streak and apex of transverse row; cilia fuscous-whitish. Hindwings with termen rounded, faintly sinuate before anal angle; color of

wing and markings as in forewings; basal and inner marginal hairs long, yellowish; a nearly straight row of 4 irregular cartridge shaped spots below middle, between veins 2 and 6; cilia as in forewings, but more orange. Under side of forewings orange-yellow, dorsal two-thirds black; markings of cell and lower three spots of transverse series reproduced; cilia as above. Hindwings and cilia light yellow-ochreous, without markings.

Distinct by the absence of markings on underside of hindwings.

The larvæ feed on *Imperata arundinacea* (*Graminacæ*). The larvæ when full grown are one inch in length, pale green; the two anterior segments are smallest. When half-grown the head is totally black; when full-grown light brown, with the usual black V-shaped mark and black ring round the head. The larvæ when full-grown constructs a sheath similar to the one it feeds in; closes up both ends and casts the skin. The pupa is at first pale olive-green, gradually becoming light brown, and is about half an inch long. The pupal state is ten to twelve days. Each larvæ conceals itself by uniting the edges so as to form a sheath where it remains, when feeding, which is usually at night; it protrudes its head just outside the sheath and nibbles the edges of it; when one sheath is devoured a second is formed.

Fernshaw, Oakleigh, and Murrumbeena, Victoria; Sydney and Balmoral, New South Wales; Cairns (*Miskin*), Mackay (*Turner*), Queensland; Hobart, Tasmania; from November to February.

56. APAUSTUS SUNIAS, Feld.

(*Pamphila sunias*, Feld., Sitzb. Ak. Wiss. Wien. Math. Nat. Cl., xl., p. 462; n. 54, 1860; *Ocybadistes walkeri*, Heron., Ann., Nat. Hist. (6), xiv., p. 106; *Ancyloxypha agraulia*, Hew., Desc. Hesp., p. 45, n. 3, 1868.)

Male and female, 17-24 mm. Head, palpi, thorax, and abdomen blackish, densely clothed with orange hairs, abdomen laterally yellow, beneath whitish. Antennæ blackish annulated with yellowish, apex of club black. Legs yellowish. Forewings elongate, triangular, costa nearly straight, termen obliquely rounded, less rounded in male; blackish-fuscous, with bright orange markings; a broad streak from base to just before two-thirds of costa, filling up whole of cell, except a narrow streak of ground color; an irregular triangular spot immediately beneath costa at five-sixths, anterior edge becoming confluent with costal patch in male; an oblique trans-

verse row of 4 spots; first immediately below and beyond triangular spot, irregular quadrate, anterior edge touching previous spot; second and third elongate, in male irregular-quadrate; fourth, irregular, in female constricted above middle; a narrow streak along inner margin from near base to two-thirds, above which is a suffused elongate streak; cilia dull ochreous, basal half blackish, round anal angle orange. Hindwings with termen faintly sinuate above anal angle; color as in forewings, markings orange; basal and inner marginal hairs orange; an irregular spot in posterior end of cell; a moderately broad curved transverse band below middle of wing, edges irregular dentate; a small spot above apical portion of band, in male becoming confluent with it; cilia orange. Under side of forewings orange-yellow, dorsal two-thirds of wing black, except towards termen; 3 lower spots of upper side reproduced; cilia as above. Hindwings beneath with color somewhat yellower; an obscure triangular patch of dull orange lying above inner margin, attenuated towards base; cilia as above.

Differs from its congeners by its brilliant coloring and broader markings.

The larvæ feed on *Cynodon dactylon* (Couch Grass), also *Imperata arundinacea*. According to Olliff (Ann. M.N.H., p. 36, 1888) they are pale green, darker at sides, considerably narrowed posteriorly, head dark brown with a white V-shaped mark in front; the lateral line very indistinct. Full fed larvæ 11 lines in length. Pupa grey, transparent. Fed on Couch Grass, at the roots of which it pupated. The imago appeared early in April.

Elwes and Edwards (Rev. Or. Hesp., p. 255, 1896), doubtfully query this species as synonymic with *Telicota dara*, Koll., an Asiatic species.

We once took this species in abundance at the Botanic Gardens, Adelaide, flying over the blossoms of Globe amaranth (*Gomphrena*) in February; also occurs at Sydney, Katoomba, Bathurst, &c., N.S. Wales; Gisborne, Melbourne, &c., Victoria; Brisbane to Cooktown, Queensland; Port Darwin; from November to April.

10. TELICOTA, Moore.

Club of antennæ elongate, apex pointed, bent. Palpi ascending, terminal joint short, pointed, erect. Posterior tibiæ with all spurs. Forewings in male with stigma; 3 in male approximated to 2, remote from 4, 5 approximated to 4 towards base. Hindwings: 5 obsolete.

An Indo-Malayan genus of moderate extent; two of the undermentioned species are found outside of Australia. In this and the following genus great care is necessary to separate the species, the markings in many instances being extremely similar.

- | | | |
|---------------------------------------------------------------------------------------------------------------------------|----|------------------------|
| 1. Forewings rather short, stigma present, markings bright orange-yellow, cell with streak of ground color... | 57 | <i>Marnas</i> , male. |
| Forewings rather long, markings reddish orange, anterior two-thirds of cell, filled in with ground color | 3 | |
| 2. Posterior edges of transverse band of forewings continued as fine streaks along veins to termen, stigma present | 59 | <i>Augias</i> , male. |
| Posterior edges of transverse band of forewings, not or hardly reaching termen; stigma present ... | 60 | <i>Bambusæ</i> , male |
| 3. Spot in cell of hindwings well marked | 58 | <i>Ohara</i> , female. |
| Spot in cell of hindwings not well marked | 1 | |

57. TELICOTA MARNAS, Feld.

(*Pamphila marnas*, Feld., Sitzb. A.K. Wiss. Wien. Math. Nat. Cl., xl., p. 462, n. 53, 1860; *Elwes and Edw.*, Rev. Orient. Hesp., p. 256, 1897).

Male and Female, 24-30 mm. Head, palpi, thorax, and abdomen blackish, mixed with greenish ochreous hairs, abdominal segments orange, palpi beneath yellow, thorax and abdomen beneath orange. Legs dull orange. Antennæ blackish, spotted beneath with orange, club beneath orange, apical third black. Forewings elongate, triangular, rather short, costa arched at base, faintly sinuate in middle, termen rounded, oblique; blackish-fuscous, with orange markings; a rather thick costal streak from base to middle, leaving extreme costal edge blackish; cell filled up with orange, except at posterior extremity, which is blackish and causes the orange coloring to appear rounded above and below; a narrow streak of ground color in middle of cell, attenuated anteriorly; an oblique transverse series of 3 subcostal spots at two-thirds from base; a very small (in some specimens moderate), spot considerably beyond and below subcostal spots between veins 4 and 5; a smaller spot obliquely above and touching last, absent in

some specimens; three obliquely placed spots; first cartridge-shaped, between veins 3 and 4, below and before the small spot; second similar, immediately below, between veins 2 and 3; third irregular, largest, strongly excised on either side in middle; stigma blackish, narrow, oblique anteriorly parallel to 3 previous spots; a narrow suffused streak along vein 1 from stigma to base; a moderate streak along inner margin from beneath irregular spot to base; cilia dull ochreous, at base fuscous, round anal angle orange. Hindwings with termen faintly sinuate above anal angle; color as in forewings, basal and inner marginal hairs orange; markings orange; a moderately broad irregular-edged median transverse band, between veins 1 and 6, continued as a streak along vein 1 to termen, band narrowed posteriorly, veins 3 and 4 obscurely outlined with fuscous on band; a small spot, sometimes absent, above apex of band; cilia orange-yellow, at base fuscous. Under side of forewing fulvous, dorsal two-thirds, except median third of termen blackish; markings of upper side, except stigma, reproduced; lower half of cell becoming black, except a median orange spot; cilia as above. Hindwings beneath yellowish-orange, becoming broadly tawny around termen; markings of upper side somewhat obscurely reproduced, edged above and below by indistinct blackish lunules; an obscure patch of blackish scales above anal angle; cilia as above.

This species stands in some collections as *Olivescens*, Herr. Sch., but the figure of that species in Ent. Stett. Zeit. (p. 79, n. 60, t. 3 fig. 14., 1869) does not agree with the species under review, but denotes a species described further on. The occasional additional spot above apex of transverse band of forewings appears on both the Brisbane and New Guinea specimens, but the Brisbane specimen lacks additional spot above transverse band of hindwings. Our male specimens (17 in number) agree exactly with the description given in Elwes and Edwards, Rev. Or. Hesp., 256, 1897.

Sydney, New South Wales; Mackay, Brisbane, and Kuranda, Queensland; in October and December. Also from Ambonia and New Guinea.

58. TELICOTA OHARA, Plotz.

(*Hesperilla ohara*, Plotz., Stett. Ent. Zeit., xlv., p. 227, 1883.)

Female, 36 mm. Head, palpi, thorax, and abdomen blackish, thorax and abdomen more or less clothed with orange hairs, beneath yellowish. Antennæ dark fuscous, annulated with

ochreous beneath, club ochreous, apical half reddish. Legs orange. Forewings elongate, triangular, costa gently arched, termen rounded, rather strongly oblique; dark fuscous, very minutely irrorated with orange; markings bright orange; a moderate streak from base along costa to near the 3 sub-costal spots; an oblique series of 3 subcostal spots immediately beyond, median smallest; 2 elongate, sometimes confluent spots in end of cell, lower anterior; an oblique transverse row of 5 spots; first very small, roundish, beyond lower subcostal spot between veins 5 and 6; second small, quadrate, just below; third moderately large, cartridge-shaped, just below second, between veins 3 and 4; fourth similar, larger, below third; fifth, largest, irregular, posteriorly excised in middle; a narrow streak from anterior edge of this along vein 1 to base; a moderate streak along inner margin from below fifth spot, finely attenuated on anterior half. Hindwings with termen faintly sinuate above anal angle; color as in forewings; markings bright orange; basal and inner marginal hairs yellowish; a roundish spot in end of cell; a transverse band somewhat below middle, cut by intersecting veins into four spots, first between veins 1 and 2, somewhat obscure, but more or less continued along vein 1 to termen; second and third cuneiform, parallel; fourth large, elongate-quadrate; cilia orange, at base blackish. Under side of both wings orange; dorsal two-thirds of forewings, except median third of termen, blackish; markings of upper side reproduced; subcostal and 2 upper spots of transverse band edged on either side with blackish points; inner marginal streak absent; cilia as above. Hindwings with markings of upper side obscurely reproduced and edged above and below with blackish lunules; a large patch of blackish extending from inner margin almost to vein 2, not reaching base; cilia orange.

The markings of this species are extremely similar to the female of preceding, but it differs by the more oblique transverse band of forewings, intense coloring and spot in cell of hindwings, besides being much less hairy at base of wings.

Mackay and Brisbane, Queensland; in December.

59. TELICOTA AUGIAS, Linn.

(*Papilo augias*, Linn., Syst. Nat., i., p. 794, 1767; *Telicota augias*, Distant, Rhop. Malay., p. 382, pl. xxxiv., f. 23, 1886; *Pamphila Krefftii*, Macleay, Proc. Ent. Soc., N.S.W., p. 54, n. 20, 1866.)

Male and Female, 26-32 mm. Head, palpi, antennæ, thorax, and abdomen dark fuscous, antennæ spotted with yellowish

beneath, club yellow, apical half reddish, thorax and abdomen clothed with long yellowish hairs, beneath yellowish. Legs yellow mixed with fuscous. Forewings elongate, moderate, costa straight, termen gently bowed, oblique; dark fuscous, with bright orange markings; a broad streak along costa from base to middle, limited by intervening veins; interneural spaces between posterior extremity of streak and apex filled in with orange, and continued along vein 7 as a narrow streak to apex; a cuneiform spot lying between base of veins 6 and 7; an outwardly oblique transverse series of 5 somewhat elongate-quadrangle spots from above inner margin at two-thirds, between veins 1 and 6, upper smallest, excised posteriorly in middle; second smaller, immediately below; third and fourth and fifth similar, but larger, the whole five have the upper and lower edges continued as a fine streak nearly to termen; not in female; cell filled in with orange, in female narrowly black in middle to two-thirds; a large cuneiform spot just below cell, from base to stigma, not in female, but appears as a narrow streak along vein 1; a narrow streak along inner margin from base to two-thirds, separated from cuneiform spot by a streak of ground color; stigma moderately thick, oblique, somewhat dentate anteriorly, and sometimes broken into 3 spots, from vein 1 beyond middle to base of vein 4; greyish-fuscous, edged on either side with black; cilia fuscous, around anal angle orange. Hindwings with termen distinctly sinuate above anal angle; color as in forewings; basal hairs yellow; lower two-thirds of cell filled up with orange, only indicated by a moderate spot in female, a submedian transverse band of orange band from veins 1 to 6, intersected by veins, upper edge irregular, lower edge excised between veins and continued along vein 1 to termen; a very narrow streak lying just above vein 6, separated from transverse band by vein; cilia yellow, fuscous at base on upper two-thirds. Under side of forewings orange; dorsal two-thirds except median third of termen blackish; markings of upper side, except stigma, reproduced; subcostal and transverse spots edged posteriorly with blackish lunules; cilia as above. Hindwings beneath orange, greenish tinged; markings of upper side reproduced in orange and edged above and below with blackish disconnected lunules; inner marginal area finely irrorated with blackish.

Immediately known from the preceding by the broad stigma and continuation of transverse streaks along veins towards termen. The species has a fairly wide range, but the Australian specimens do not differ from those taken in Calcutta.

Larvæ full fed ; 35 mm. Moderate, cylindrical, somewhat rugose, anal segment with a few shorty fuscous hairs. Head hardly smooth, blackish with usual V-shaped black mark, on either side of which is a broad streak of light fuscous. Body light yellowish-green, with a suffused yellowish spot on tenth segment, anal segment with a black spot on posterior extremity, and a black transverse spot on anterior edge, faintly produced on lower edge ; dorsal moderate, well developed, deep green, spiracular ochreous-white ; supra-spiracular deep green ; sub-spiracular indistinct. Spiracles ill-defined ; greenish. Full fed in November ; feeds on *Imperata arundinacea* (*Graminaceæ*). The pupæ are cylindrical, and smooth. Head dark fuscous, forehead without projection.

Sydney, New South Wales ; Brisbane to Cooktown, Queensland ; several specimens from November to April. Also from India, Ceylon, Java, &c.

60. TELICOTA BAMBUSÆ, Mre.

(*Pamphila bambusæ*, Moore, P.Z.S., p. 691, t. 45, fig. 11, 1878 ; *Pamphila pythias*, Mab. Pet. Nov., ii., 234, 1878 ; *Telicota bambusæ*, Dist. Rhop. Malay., p. 382, n. 2, t. 35, fig. 12, 1882-6.)

Male and female, 35-40 mm. Head, palpi, antennæ, thorax, legs, and abdomen as in *Augias*. Forewings elongate-triangular, termen gently bowed, oblique ; color, markings, and stigma as in *Augias*, excepting that the transverse band of five spots is more abbreviated and have only the lower edges continued towards termen, but not near reaching it. Hindwings with termen distinctly sinuate before anal angle ; color, markings, and cilia as in *Augias*. Underside of both wings as in *Augias*, excepting that the color of hindwings is generally bright orange-yellow, and in the female before us all markings are obliterated and slightly greenish tinged.

This species is closely allied to *Augias*, but apart from its larger size and more brilliant coloring of under side it can easily be distinguished from that species by the abruptness of orange transverse band of forewings. This character is more pronounced in the Indian and Indo-Malayan specimens before us, those from Australia showing a greater tendency to be continued as a fine streak along veins to termen.

Sydney, New South Wales ; Mackay, Townsville, and Brisbane, Queensland ; in November and December ; also from India and the Malay Archipelago.

11. ERYNNIS, Schranck.

Club of antennæ elongate, apex pointed, bent. Palpi ascending, terminal joint short, stout, conical, erect, posterior tibiæ with all spurs. Forewings in male sometimes with stigma; 3 approximated to 4, 5 approximated to 4 towards base. Hindwings with 5 obsolete.

An Indo-Malayan genus of moderate extent, differing chiefly from the preceding by the occasional absence of the stigma and approximation of veins 3 and 4 of forewings. The yellow and black species being similar in markings, a satisfactory tabulation is difficult. The following is the best we can contrive:

- | | | |
|----------------------------------------------------------------------------------------------------------|----|----------------------------|
| 1. Wings blackish, without markings; cilia snow white ... | 67 | <i>Fuliginosa</i> . |
| Wings blackish, markings dull orange; cilia fuscous-orange | 6 | |
| 2. Under side of hindwings greenish-tinged, with two transverse rows of blackish spots ... | 62 | <i>Palmarum</i> , male. |
| Under side of hindwings blackish-fuscous, with one row of bluish spots | 1 | |
| 3. Forewings above without markings in cell, transverse band white... | | <i>Cæsina</i> . |
| Forewings above with cell filled up with pale yellow | 2 | |
| 4. Forewings above without markings in cell, transverse band yellow | 63 | <i>Macleayi</i> . |
| Forewings above with cell filled up with orange | 5 | |
| 5. Forewings above with cartridge-shaped spot joining apical spots and transverse band ... | 64 | <i>Sperthias</i> , male. |
| Forewings above without such spot | 65 | <i>Olivescens</i> , female |
| 6. Band of hindwings dull orange, moderately broad, rather broadly separated by intervening veins | 66 | <i>Ulama</i> , male. |
| Band of hindwings bright orange, moderate, hardly separated by intervening veins | 5 | |

7. Wings above and below suffused with bright orange scales, markings hyaline, male without stigma 68 *Fulgida*.
 Wings above and below, moderately suffused with pale greenish - yellow, markings hyaline, male with very oblique whitish stigma ... 69 *Mathias*.
8. Forewings fuscous; markings bright orange, cell filled in with orange, except a median streak of ground color, median spots hyaline 61 *Angustula*, male
 Forewings blackish; cell without markings except a quadrate spot at posterior extremity, markings not hyaline ... 6
9. Hindwings beneath purplish, mixed with ferruginous, markings of upper side absent ... 4
 Hindwings beneath yellowish, tinged with fuscous, markings of upper side reproduced 5

61. ERYNNIS ANGUSTULA, Herr-Sch.

(*Pamphila angustula*, Herr-Sch., Stett. Ent. Zeit., p. 79, n. 58, 1869.)

Male, 32 mm. Head, thorax, palpi, antennæ, and abdomen blackish, thorax and abdomen clothed with orange hairs, abdomen with ochreous segmental rings, antennæ spotted with yellowish beneath. Legs orange. Forewings elongate, triangular, termen obliquely rounded; dark fuscous, markings orange; stigma absent; a moderate streak along costa from base to beyond middle, accompanied at its posterior end by 3 fine interneural streaks of orange; a narrow streak along upper margin of cell; a similar streak along lower margin, somewhat bent up to nearly touch previous streak, leaving a streak of ground color in middle of cell; an oblique transverse series of 3 cartridge-shaped sub-costal spots at three-fourths from base; an elongate spot below resting on vein 4; an inwardly oblique transverse series of 3 spots; first cuneiform, partly hyaline, excavated posteriorly, lying between veins 3 and 4; second similar, just below; third below second, not hyaline, irregular,

excised in middle on either side; a narrow streak along inner margin, from beneath third spot to base, attenuated anteriorly; a similar short streak just above; cilia orange, more pronounced around anal angle. Hindwings with termen faintly sinuate before anal angle; color as in forewings; basal and inner marginal hairs orange; an orange spot in cell; a moderate transverse orange sub-median band, limited by veins 1 and 6, inclining to be continued along vein 1, but not reaching termen, edges of band somewhat crenulate, median portion with 3 hyaline spots, cilia as in forewings. Under side of forewings orange-fuscous, dorsal portion rather broadly blackish; markings of upper side reproduced; lower third of cell filled up black, leaving a spot of orange beyond middle; cilia as above. Hindwings orange, mixed with fuscous, markings and cilia of upper side reproduced.

Somewhat allied to *Marnas*, Feld., but the hyaline spots and absence of stigma readily separate it from that species.

Mackay, Queensland; one specimen. The type was taken in Fiji.

62. ERYNNIS PALMARUM, Moore.

(*Pamphila palmarum*, Moore, P.Z.S., 1878, p. 690, pl. xlv., fig. 6, 7, male and female; *Hesperia chrysozona*, Plotz., Ent. Stett. Zeit., xlv., p. 228, 1883; *Pamphila augiades*, Var., *bambusæ*, Staud, Iris., ii., pp. 144, 165, 1889; *Padraona chrysozona*, Semper, Schmett, Phillip., p. 301, pl. xlix., fig. 13, male, fig. 14 female, pl. B., fig. 11, larva (as *Telicota bambusæ*, 1892).

Male 40, mm. Head, palpi, antennæ, thorax, and abdomen dark fuscous, palpi beneath yellowish, club of antennæ beneath yellowish, apical half of club reddish, thorax and abdomen clothed with greenish-yellow hairs. Legs orange. Forewings elongate, triangular, costa gently arched towards base, faintly sinuate in middle, termen faintly rounded, oblique; blackish, with orange markings; basal hairs yellow; a moderate streak along costa from base to middle; two narrow streaks, posterior to this separated by veins; 3 elongate-cuneiform obliquely placed subcostal spots just beyond, posteriorly excised, and more or less continued as fine streaks along veins to costa and termen; cell filled up with orange; a series of 5 inwardly oblique transverse spots, excised anteriorly and posteriorly; first smallest, immediately below apex of third subcostal spot; second, third, fourth, and fifth gradually increasing in size, fifth largest, lower third continued as a streak along vein to

base; a moderate, posteriorly dilated, streak along inner margin from base to posterior extremity of fifth spot; cilia orange, blackish at base on upper two-thirds. Hindwings with termen rather strongly sinuate above anal angle, causing anal angle to appear prominent; basal and inner marginal hairs long, orange; color as in forewings; a moderate suffused orange patch in cell; a broad transverse orange submedian band, between veins 1 and 7, broadest anteriorly and then continued moderately along vein 1 throughout, edges of band more or less crenulate; cilia orange. Underside of forewings blackish; markings of upper side reproduced; subcostal and transverse series of spots edged posteriorly by a series of blackish spots, lower one becoming blotch-like and filling up space between vein 1 and inner margin; area between this and apex greenish tinged; basal third of cell blackish; cilia as above. Hindwings beneath greenish yellow; transverse band reproduced in reddish orange, and edged above and below with a blackish line, interrupted so as to form spots; a reddish, posteriorly black edged spot in end of cell; inner marginal area broadly reddish-orange, attenuated towards base; a large blackish blotch above anal angle, obscurely cut in centre by vein 1; a fine black line along termen, abruptly terminating at vein 2; cilia as above.

The female of this species is, according to Moore (P.Z.S., p. 690, 1878): "Paler brown above, the yellow bands of upper side also paler, less prominent, there being no yellow along costal border of forewings, and no median streak from base of hindwings. Under side pale vinous-brown, this color pervading upper portion of the discal on the forewings, and entire discal band of hindwings."

The male differs from its allies by the band of hindwings extending to vein 7, and the greenish under side of hindwings and attendant markings.

Scott (Austr. Sep., pl. xiv.) figures the male and female of this species as *Phineus*, Cr., and the female appears to be more like *Ulama*, Butler, but the male is well drawn and easily recognisable. The type of *Phineus*, Cr., came from Surinam, and has been erroneously recorded from Australia. Watson (P.Z.S., 1893) considers Scott's male to represent the male of *Augiades*, Feld., and the female a bad figure of *Prusias*, Feld. Both species, so far as we are aware, have not yet been taken in Australia. The larva, which is pale greenish yellow, feeds on various species of *Palms*. We have bred specimens from *Kentia fosteriana* in November.

Sydney, New South Wales; Cooktown, Townsville, and Mackay, Queensland. It has not occurred at Brisbane up to the present. From November to January; nine specimens.

63. *ERYNNIS MACLEAYI*, Plotz.

(*Hesperilla Macleayi*, Plotz., Stett. Ent. Zeit., xliv., p. 227, 1883; ? *Pamphila autoleon*, Misk., Proc. Roy. Soc., Queensland, 2, p. 147, 1889.)

Male and female, 30-46 mm. Head, palpi, antennæ, thorax, and abdomen dark fuscous, palpi beneath yellowish, thorax and abdomen clothed with yellowish hairs. Legs ochreous, fuscous tinged. Forewings elongate, triangular, costa nearly straight, termen gently bowed, oblique; dark purplish fuscous, markings orange; anterior half of costa dull orange; an oblique transverse series of 3 cartridge-shaped sub-costal spots at two-thirds from base, posterior extremities excised; an inwardly oblique transverse row of 4 spots; first very small, lying on middle of vein 4; second cuneiform, obliquely below; third similar, obliquely below second; third irregular quadrate, lying below on vein 1, the lower third is continued as a fine streak along vein 1 to base; a streak along inner margin from base to middle, posteriorly dilated; stigma short, irregular, broken into 3 spots, fuscous, lying close to anterior edge of transverse spots; cilia dark fuscous, becoming orange on lower third of termen. Hindwings with termen sinuate above anal angle; color as in forewings; basal and inner marginal hairs orange; a suffused streak in cell near base; a rather narrow sub-median transverse orange band, between veins 1 and 6, extremities suffused, hardly separated into spots by intersecting veins, upper edge deeply sinuate below apex, posterior edge somewhat lunulate; cilia deep orange, becoming fuscous on upper two-thirds at base. Under side of forewings ferruginous, tinged with purplish, much lighter on upper two-thirds of termen; markings of upper side reproduced in ochreous; a narrow ochreous streak in cell; cilia as above. Hindwings beneath with color as forewings, but somewhat tinged with ochreous; markings of upper side obscurely reproduced; a dull ochreous streak between veins 1 and 2; cilia as above.

Easily recognised by the paucity of markings and absence of coloring in cell on upper side of forewings. The stigma is obscure and liable to be overlooked. The large female is of exceptional size; the average is about 36 mm.

Cardwell, Cairns, and Brisbane, Queensland; ? Sydney, New South Wales; in November.

64. ERYNNIS SPERTHIAS, Felder.

(*Hesperilla sperthius*, Feld., Verh. Zool. Bot. Ges., xii., p. 492, n. 182, 1862).

Male 44, mm. Head, palpi, thorax, antennæ, and abdomen dark fuscous, thorax and abdomen clothed with dense ferruginous-orange hairs, beneath yellowish, abdomen with suffused lateral bands of orange posteriorly, antennæ beneath yellow, not spotted, club yellowish, apical half reddish. Legs orange. Forewings elongate, triangular, costa almost straight. termen oblique, faintly bowed; dark fuscous, with orange markings; a moderate costal streak from base to just before two-thirds, cut posteriorly by veins 9 to 12; an oblique transverse series of 3 elongate-cuneiform subcostal spots at three-fourths from base, posteriorly excavated, edged more or less, continued as fine streaks along veins towards termen and costa; cell filled up with orange, except a small patch of ground color at posterior end of cell, an inwardly oblique row of 5 spots; first small, immediately below posterior extremity of lowest subcostal spot, sometimes hardly traceable; second below and slightly beyond, similar; third cartridge-shaped, between veins 3 and 4 near base; fourth elongate-quadrate obliquely below; fifth irregular, lower half continued as a thick streak along vein 1 to base; some orange scales just above near base; a moderately thick streak along inner margin from base to middle, posteriorly dilated; cilia blackish, between anal angle and vein 1, orange. Hindwings with termen sinuate above anal angle; color as in forewings; basal and inner marginal hairs orange; markings orange; the basal hairs accumulate near posterior extremity of cell and form a more or less distinct patch; a moderately broad transverse submedian series of 5 somewhat quadrate spots, between veins 1 and 6, separated by intervening veins, except that between veins 1 and 2, which sometimes coalesce, thus forming only four spots; cilia orange narrowly mixed at base with blackish on upper two-thirds. Under side of forewings blackish; basal half of cell blackish; wings beyond cell and upper two-thirds of termen orange; markings upperside faintly reproduced; 3 lower spots between veins 1 and 4 very distinct, but streak along vein one, and inner marginal streak absent; a fine blackish hind marginal line, just reaching vein 2; cilia as above. Hindwings beneath orange-ferruginous, markings of upper side faintly reproduced; a large blackish elongate patch above anal angle; a smaller patch above termination of vein 1; hind marginal line and cilia as in forewings.

Distinct from the other similarly colored species in the Australian group by its large size. It has been known to Australian collectors as *Augiades* Felder, an insect, as before mentioned, occurs only in Amboina and Batavia. According to Elwes and Edwards (Rev. Or. Lep., pp. 250, 253) the female of that species is very similar to *Palmarum* Mre., and the females possess no sexual characters by which they may be separated. They state, however, in the male of *Augiades*, that the *whole* of the cell of forewing on under side is orange; in *Sperthias* the basal half is black. Most Australian collectors avow that the insect described by Butler as *Ulama* is the female of this species, but as we have no really reliable source of information (but we hope to have shortly) to depend upon, we think it better to retain them as distinct species for the present. This present species is very similar in appearance to the following, but the distinctive characters appear to be its larger size, additional dot below subcostal series (thus forming a complete fascia of marks), and broader band of hindwings, and additional mark above apex of same. These markings are fairly constant.

The larva feed on several kinds of palms, notably *Livistona Australis*, *Kentia fosteriana*, and *Belmoria*. The imago appears from November to February.

Brisbane, Mackay, Cooktown, and Cairns, Queensland; Sydney, New South Wales; Java, India, and Borneo.

65. ERYNNIS OLIVESCENS, Herr-Sch.

(*Pamphila olivescens*, H.S., Stett. Ent. Zeit., p 79, n. 60, t. 3, fig. 14, 1869).

Female, 36-38 mm. Head, palpi, antennæ, thorax, legs and abdomen as in *Sperthias*. Forewings elongate-triangular, termen gently bowed, oblique; color and markings as in *Sperthias*, but orange spot between veins 7 and 8 and connecting subcostal spots with transverse fascia absent. Hindwings with termen rounded, faintly produced before anal angle; color and markings as in *Sperthias*, but sub-median band much narrower and not continued above vein 6; cilia of both wings as in *Sperthias*. Under side of both wings orange-yellow, markings of upper side, except inner marginal streak, reproduced in pale ochreous; dorsal third of wing, except along termen, blackish; basal half of cell blackish, division suffused.

The specific distinctions are given at footnote of previous species. This is the insect which has stood for *Phineus*, Cr., in Australian collections, and is probably the one Mr. Mat-

thews refers to (T.E.S., p. 179, 1888) when writing on the subject. Its habits are similar to the previous species. Schaeffer's figure is good.

Sydney, New South Wales; Brisbane, Queensland; eight female specimens in November.

66. ERYNNIS ULAMA, Butler.

(*Pamphila ulama*, Butl., Trans. Ent. Soc., p. 504, 1870; ? *Corone ismenoides*, Mab., pet. Now. Ent., ii., ? 1878.)

Female, 38-42 mm. Head, palpi, antennæ, thorax, and abdomen dark fuscous, palpi and thorax beneath ochreous, thorax and abdomen more or less clothed with yellowish hairs, antennæ beneath yellowish, club reddish on apical half. Legs ochreous-fuscous. Forewings elongate, triangular, costa gently arched on basal half, termen obliquely rounded; dark purplish-fuscous, somewhat shining; markings dull golden-orange; basal hairs bluish white; a somewhat quadrate spot in end of cell, excised in middle; upper edge more elongate posteriorly; an oblique transverse series of 3 elongate subcostal spots at two-thirds from base; a transverse series of 4 inwardly oblique spots; first cartridge-shaped, near base of veins 3 and 4; second below, similar, larger; third and fourth elongate, below second, only separated by a streak of ground color; all markings sometimes nearly obsolete; cilia dark fuscous. Hindwings with termen sinuate above anal angle; basal and inner marginal hairs bluish white; a sub-median transverse row of 5 equidistant orange spots, between veins 1 and 6, anterior pair rather obscure; cilia as in forewings, but orange around anal angle. Under side of forewings fuscous, purplish tinged, upper two-thirds of termen and apical area dull reddish; markings of upper side reproduced in ochreous-white, third and fourth spots of transverse series becoming confluent. Hindwings beneath with color as in forewings, basal area somewhat bluish-tinged; markings of upper side reproduced; inner marginal area broadly dark fuscous and becoming blotch-like on anal angle: cilia as above.

Not unlike female *Palmarum*, according to Moore's figure, but very different on under side. We have 2 supposed *males* of this species, but in poor condition.

Sydney, New South Wales; Bowen, Mackay, and Brisbane, Queensland; in November and January.

67. ERYNNIS FULIGINOSA, Misk.

(*Pamphila fuliginosa*, Misk., female, Proc. Roy. Soc., Queensland, vi., p. 147, 1889; male, *ib.*, Ann., Queensland Museum., p. 76, 1891.)

Male and female, 35-40 mm. Head, palpi, antennæ, thorax, legs, and abdomen dark fuscous, thorax and abdomen sparsely clothed with yellowish hairs, palpi and thorax beneath ferruginous, abdomen beneath fuscous, with four whitish segmental rings, club of antennæ beneath ochreous. Forewings elongate-triangular, costa faintly sinuate in middle, termen obliquely rounded; blackish, fuscous, with bluish tinge; basal hairs yellowish; a narrow, obscure, yellowish streak along inner margin from base to middle; stigma black, oblique; cilia dark fuscous. Hindwings with termen slightly sinuate before middle; color as in forewings; basal and inner marginal hairs light ochreous; cilia dark fuscous, becoming snow-white from middle of termen to anal angle. Under side of forewings ferruginous, basal and median area more or less dark fuscous; some bluish scales near base. Hindwings beneath with color as in forewings; basal area bluish tinged; a transverse row of 4 equi-distant bluish spots beyond middle of wing, less distinct in male; cilia as above.

Known by the snow white cilia of hindwings.

Cairns, Cardwell, and Mackay, Queensland; in January.

68. ERYNNIS FULGIDA, Misk.

(*Hesperilla fulgidus*, Misk., Proc. Roy. Soc., Queensland, p. 151, 1889.)

Male and female, 28-32 mm. Head, palpi, thorax, antennæ, and abdomen dark fuscous, thorax and abdomen densely clothed with orange hairs, beneath orange, antennæ yellowish beneath, apical half of club blackish beneath. Legs yellow. Forewings elongate, triangular, costa nearly straight, termen oblique, faintly sinuate on lower third; dark fuscous, densely irrorated more or less throughout with fine ochreous orange scales, more dense on basal half of wing; markings yellowish, semi-hyaline; an oblique transverse series of 3 elongate subcostal spots, upper nearly obsolete, at two-thirds from base; a moderate, somewhat ovate spot lying on vein 4 and immediately below lower subcostal; a second, cartridge-shaped, obliquely below, lying near base of veins 3 and 4; a third, large and similar, lying at base of veins 2 and 3, posterior edge excised; cilia fuscous-whitish, becoming dark fuscous on basal half. Hindwings with termen sinuate before middle; color as in forewings; base, cell, and inner margin densely clothed with long bright ochreous hairs, becoming very dense along vein 1; a transverse sub-median series of 4 yellowish semi-hyaline parallel spots, between veins 2 and 6, third spot more

elongate than others, and extending beyond apices of other 3 ; cilia yellowish, orange, blackish at base. Under side of both wings yellowish orange ; dorsal third of forewings blackish ; markings of upper side reproduced and edged with shining-golden ; markings on hindwings reproduced and similarly edged. Cilia on both wings as above.

Known by its intense coloring and similarity of upper and under side of both wings.

Mr. Illidge has taken the larvæ on millett.

Brisbane, Mackay, and Duaringa, Queensland ; in December.

69. ERYNNIS MATHIAS, Fab.

(*Hesperilla mathias*, Fab., Ent. Syst. Supp., p. 433, n. 289, 290, 1798 ; *Hesperia thrax*, Led., Verh. Zool. Bot. Ges. Wren, 1855, p. 194, plate 1, figs. 9-10 ; *H. agna*, Moore, P.Z.S., p. 791, 1865 ; *H. chaya*, *ib. l.c.*, 791, 1865 ; *Pamphila mencia*, Moore, Ann. and Mag. Nat. Hist. (4), xx., p. 52, 1877.)

Male and female, 30-36 mm. Head, palpi, thorax, legs, and abdomen dark fuscous-golden, clothed with fuscous-golden hairs, head and palpi sometimes greenish-tinged, palpi and thorax beneath whitish-ochreous. Antennæ dark fuscous, beneath ochreous, spotted with blackish, club ochreous beneath, apical half reddish. Forewings elongate, triangular, costa gently arched, termen obliquely rounded, somewhat sinuate below middle ; dark fuscous-golden, somewhat shining ; basal and inner marginal areas clothed with greenish-yellow hairs ; markings of male rather obscure, in female well developed, whitish ; a spot in end of cell ; a second immediately above ; an irregular oblique transverse series of 3 roundish spots beneath costa at two-thirds from base ; a small roundish spot below and slightly beyond, resting on vein 4, almost obsolete in male ; a moderate roundish spot obliquely below and before, lying near base of veins 3 and 4 ; a large irregular diamond-shaped spot, lying near base of veins 2 and 3, only represented in male by a narrow streak, from which proceeds a very inwardly oblique dull whitish, black-edged stigma, reaching nearly to middle of vein 1 ; a moderate ovate spot lying on vein 1 beyond middle, obsolete in male ; cilia dark fuscous, tips whitish. Hindwings with termen sinuate above anal angle ; color as in forewings, dorsal two-thirds, except termen, densely clothed with ochreous hairs. Under side of both wings dark fuscous, clothed with ochreous-whitish scales, except dorsal two-thirds of forewings, which is fuscous, markings of upper side, except stigma, reproduced ; a very small whitish sub-median

spot, sometimes absent, on hindwings between veins 2 and 3; not in male; cilia as above.

Somewhat allied to *Colaca*, Moore, but differs, according to Elwes and Edwards (Rev. Or. Hesp., p. 171, 1897), from that species by the absence of spots on hindwings *above*, although we possess a female specimen from Palmerston, South Australia, in which 2 yellowish sub-median spots are well developed, otherwise similar.

Mr. Miskin gives *Hesperilla julianus*, Latr., Enc. Meth., ix., p. 763, n. 99, 1819, as a synonym.

The larvæ are said to be attached to *Ischæmum pretinctum*.

This is probably the most widely distributed species we have in Australia; occurring also in India, Ceylon, Japan, Borneo, China, and Malayana, also Brisbane, Mackay, and Townsville, up to Cape York in Queensland; Palmerston, Northern Territory, South Australia; from October to February.

70. ERYNNIS CÆSINA, Hew.

(*Carystus cæsina*, Hew., T.E.S. (3), ii., 491, n. 15, 1866; Ex. Butt., v., Hesp., t. 6, fig. 15, 1866; *Pamphila albifascia*, Misk., Proc. Roy. Soc., Queensland, p. 148, 1889.)

Male, 26 mm. Head, palpi, thorax, and abdomen blackish, thorax and abdomen clothed with greyish hairs, palpi whitish white. Legs dark fuscous, coxæ more or less clothed with beneath. Antennæ black, club beneath, except apex snow white. Legs dark fuscous, coxæ more or less clothed with white hairs. Forewings elongate, triangular, costa gently arched, termen bowed on upper half, thence nearly straight, oblique; dark fuscous, spot with bluish purple; markings white; a small subcostal spot at two-thirds from base, indicating lower of subcostal series; a somewhat quadrate spot just below, resting on vein 4; a cuneiform spot lying at base of veins 3 and 4; a large, somewhat quadrate spot, obliquely below; a roundish spot immediately below this, sometimes accompanied by a suffused whitish spot below, almost coalescing; cilia blackish, basal half black. Hindwings with termen irregularly rounded; color as in forewings; basal area light fuscous; an oblique transverse band of snow-white just beyond extremity of cell, edges irregular, anteriorly narrowed and suffused, posterior extremity suffused, hardly reaching vein 7; cilia as in forewings. Wings beneath dark reddish, mixed with purplish; basal third of forewings and along inner margin fuscous; markings of upper side of forewings reproduced, and with an additional spot just below subcostal. Hind-

wings with a large white, somewhat triangular, irregularly edged patch, upper edge extending from base through middle of cell to vein 7 and two-thirds from base, with a deep indentation of ground color in middle and sinuate on either side of this; lower edge crenulate beyond middle, extending from veins 1 to 7, and containing a spot of ground color at base of vein 2; a white streak along inner margin, separated from patch by a streak of ground color; cilia as above, but becoming white around ternus.

The white club of antennæ and rich coloring of under side makes this species easy of recognition.

Cairns, Queensland; two specimens, in October; also from New Guinea.

12. NOTOCRYPTA, Nic.

Club of antennæ elongate, apex pointed, bent. Palpi sub-ascending, terminal joint short, obtuse, porrected. Posterior tibiæ with all spurs, rather long. Forewings in male without stigma; 3 from rather near 4, 5 somewhat approximated to 4. Hindwings: 5 obsolete.

71. NOTOCRYPTA FELISTHAMELII, Boisd.

(*Thymele Feisthamelii*, Boisd., Voy. Astr. Lep., p. 159, pl. ii., fig. 7, 1832; *Pleisoneura curvifascia*, Feld., Wien. Ent. Mon., vi., p. 29, 1862; *P. alysos*, Moore, P.Z.S., 1865, p. 789; *P. albifascia*, *ib. l.c.*, 1878, p. 843, pl. 843, pl. liii., fig. 3, male; *P. restricta*, *ib.*, Lep. Cey., i., p. 178, 1881; *P. volux*, Mab., Ann. Soc. Ent. Belg., 1883, p. lvi.; *P. clavata*, Staud, Iris., ii., p. 153, pl. ii., fig. 9, 1889.)

Male and female, 36-46 mm. Head, palpi, antennæ, thorax, legs, and abdomen blackish, thorax clothed with light fuscous hairs, palpi and abdomen mixed with whitish beneath, club of antennæ somewhat ochreous beneath. Forewings elongate, triangular, costa strongly arched, termen obliquely rounded; black, markings silvery white, hyaline; a broad transverse irregularly edged median band, from immediately beneath costa, slightly curved, and terminating on vein 1 at two-thirds from base; two sub-costal spots at two-thirds from base; a similar spot near termen, lying between veins 4 and 5; cilia blackish. Hindwings with termen somewhat crenulate; color and cilia as in forewings; basal and inner margin hairs light fuscous, darker basally. Under side of both wings light fuscous, darker basally; costa of hindwings dark fuscous, faintly purplish tinged; markings of upper side of forewings reproduced.

We have followed Elwes and Edwards in the synonym of this

species. The Australian form is Moore's *Restricta*, which varies very little, those from the more northern districts of Queensland being most constant.

Cardwell, Cairns, Cooktown, and Mackay, Queensland; India, Java, China, and Philippines; November to January.

13. BADAMIA, Moore.

Club of antennæ elongate, pointed, bent. Palpi ascending, terminal joint long, slender, slightly swollen near apex, obtusely pointed, porrected. Posterior tibiæ with all spurs. Forewings in male without stigma; 5 parallel to 4 and 6, equidistant. Hindwings 3 and 4 remote, 5 present.

Contains only the single species, recognised by the curious form of wings.

72. BADAMIA EXCLAMATIONIS, Fabr.

(*Papilio exclamationis*, Fab., Syst. Ent., p. 530, 1775; *P. ladon*, Cramer, Pap. Ex., iii., pl. cclxxxiv., fig. c., female; *Ismene thymbron*, Feld., Sitzb., Ak. Wiss. Math. Nat. Cl., xl., p. 461, Lep., p. 14, 1860.)

Male and female, 58-64 mm. Head, palpi, thorax, antennæ, and legs fuscous-ochreous, head more ochreous, palpi and thorax beneath whitish, antennæ yellowish-beneath near base, club reddish beneath. Forewings very elongate, costa arched, termen oblique, somewhat sinuate above anal angle; dark ochreous-fuscous, shining somewhat; basal hairs greyish; costa and inner margin broadly suffused with obscure greenish-white; markings semi-hyaline whitish; a cuneiform spot in middle of cell, absent in male, lower edge shortly produced; a triangular spot near base of veins 3 and 4, nearer to 4 than 5, represented in male by a small white spot; a large elongate upper edge excised, represented in male by a very elongate streak just below base of veins 3 and 4; an elongate streak lying on vein 1 beyond middle, absent in male; cilia dark fuscous. Hindwings with color as in forewings, termen strongly excised below middle and produced on vein 1; basal and inner marginal hairs grey-whitish, faintly bluish-tinged; cilia fuscous-whitish. Under side of wings grey-whitish, markings of upper side obscurely reproduced; base of forewings dark fuscous; a suffused elongate streak of dull whitish above inner margin beyond middle; hindwings with a somewhat suffused crescentric whitish mark at two-thirds from base, between veins 1 and 2; area around anal angle dark fuscous; cilia whitish, terminal half tinged with fuscous.

Sydney, Bulli, and Richmond River district, New South Wales; Mackay, Cairns, and Cooktown, Queensland; occurs also in India, Ceylon, and Tonga.

14. HASORA, Moore.

Club of antennæ elongate, pointed, bent. Palpi ascending, terminal joint long, slender, slightly swollen near apex, obtusely pointed, porrected. Posterior tibiæ with all spurs. Forewings in male sometimes with stigma; 1b distorted downwards near base, 5 parallel to 4 and 6, slightly nearer 6 at base. Hindwings: 3 and 4 closely approximated basally; 5 present.

An Indo-Malayan genus of moderate extent, somewhat allied to *Ismene*, Swanison, differing, however, by the curious distorting of vein 1b. The pale spots of forewings are much more distinctly developed in female than in male; in fact, in some species the latter sex are entirely devoid of markings on upper side.

- | | |
|----------------------------------------------------------------------------------------|----------------------------|
| 1. Forewings above without markings, except stigma | <i>Chromus</i> , male. |
| Forewings above with 3 whitish spots | <i>Lucescens</i> , female. |
| 2. Wings beneath iridescent purplish without markings | <i>Lugubris</i> , male. |
| Wings beneath blackish fuscous, with a few bluish-white spots ... | 5 |
| 3. Forewings above fuscous, without markings or stigma | <i>Bilunata</i> . |
| Forewings above fuscous, with moderate stigma | 6 |
| 4. Hindwings beneath bluish-green transverse band, very broad, ochreous, entire | <i>Discolor</i> . |
| Hindwings fuscous-lilac, transverse band moderate, interrupted at vein 1b | 3 |
| 5. Basal hairs brilliant golden-green... Basal hairs greenish | <i>Doleschallii</i> . 4 |
| 6. Transverse band of hindwings broad, whitish, entire, not interrupted | <i>Hurama</i> . |
| Transverse band of hindwings narrow, pure white, interrupted at vein 1b | 1 |

73. HASORA BILUNATA, Butl.

(? *Hasora haslia*, Swinh., Ann. Mag. N.H., iii. (7), 107.)

Male and female, 50-60 mm. Head, palpi, and thorax dark fuscous, mixed with metallic greenish hairs. Abdomen and antennæ dark fuscous, abdomen somewhat purplish tinged, palpi beneath ochreous, club of antennæ reddish beneath. Legs fuscous. Forewings elongate, triangular, costa gently arched, termen hardly rounded, oblique; dark fuscous, somewhat tinged with greenish-golden; basal hairs bluish-green; spots whitish, semi-hyaline; all markings in male absent; stigma absent; a small round subcostal spot at two-thirds from base between veins 6 and 7; an irregular triangular spot lying between veins 3 and 4 beyond middle; a similar spot obliquely below, between veins 2 and 3, touching vein 3; cilia dark fuscous. Hindwings with color as in forewings, termen produced on vein 1; basal and inner marginal hairs metallic blue-green, fuscous posteriorly; cilia as in forewings. Underside of both wings ochreous-fuscous, lighter in cell and along termen; markings of upper side of female reproduced, and with a suffused whitish spot on vein 1b; beyond subcostal spot is a short suffused obscure transverse whitish streak, hardly traceable in male; hindwings with faintly curved transverse snow-white fascia, narrowed at commencement and gradually dilated to termination from costa at three-fifths direct to vein 1a above anal angle; a large dull blackish apical patch; a moderate suffused, whitish patch on inner margin above anal angle; cilia dark fuscous, with a short streak of white at base on either side of anal angle.

Somewhat allied to the following, but very distinct by the much narrower fascia of hindwings, more sombre coloring, and especially by the absence of stigma of male. It closely resembles *Chromus*, but differs by the presence of stigma, larger size, and spot on vein 1b.

Brisbane; Queensland, in November.

74. HASORA LUCESCENS, Lucas.

(*Ismene lucescens*, Lucas, Proc. Roy. Soc., Queensland, vol. xv., p. 138, 1899.)

Male and female, 42-48 mm. Head, thorax, and abdomen dark fuscous, more or less densely clothed with greenish hairs. Palpi and antennæ dark fuscous, palpi beneath ochreous. Legs ochreous-fuscous. Forewings elongate, triangular, costa gently arched, termen nearly straight, oblique; dark velvety-fuscous; basal hairs greenish; markings white, semi-hyaline; absent in male; a somewhat triangular shaped spot near base

of veins 3 and 4; a similar spot, excised posteriorly obliquely below, between veins 2 and 3; stigma of male narrow, curved, blackish, from inner margin before middle, thence curved round to base of vein 3, suffusedly edged with blackish; sometimes a very minute white subcostal spot between veins 6 and 7, generally absent; cilia dark fuscous, tips whitish. Hindwings with termen produced on vein 1; color as in forewings; basal hairs greenish; inner margin broadly dull light fuscous; cilia as in forewings. Under side of both wings fuscous, washed with bluish-purple; cell of forewings blackish; markings of upper side of female reproduced, hindwings with a moderately broad direct transverse white fascia, edges suffused, and mixed with bluish, from costa at three-fifths to vein 1b; a large patch of velvety black on anal angle; a white patch on inner margin just above anal angle; an obscure dull whitish streak along vein 1a to base; cilia as above, black on anal angle, and with a fine white basal line between veins 1b and 3.

Cooktown and Cairns, Queensland; in October and December. The types came from Cairns. In the original description no mention is made of the stigma of male. It could easily be passed over, as it is somewhat hidden by the long basal hairs.

75. HASORA DISCOLOR, Felder.

(*Goniloba discolor*, Feld., Wien. Ent. Mon., iii., p. 405, n. 50, 1859; *Ismene discolor*, ib., Reise. Nov. Lep., iii., taf. 72, f. 17, 1867.)

Male and female, 40-48 mm. Head, thorax, and abdomen dark fuscous densely clothed with metallic-green hairs, palpi and antennæ dark fuscous, palpi, thorax, and abdomen beneath blue-green; legs fuscous. Forewings elongate, triangular, costa gently arched, termen gently bowed, oblique, dark fuscous-golden; basal hairs metallic-blue-green; stigma absent; cilia dark fuscous. Hindwings with termen produced on vein 1; color and basal and inner marginal hairs as in forewings; a tuft of long metallic-blue hairs on inner margin above anal angle; cilia as in forewings, but becoming black from vein 1b, around inner margin. Under side of both wings blue-black, becoming olive-greenish on hindwings on basal half; markings of forewings golden-greenish; a slightly outwards curved narrow transverse fascia; from five-sixths of costa to anal angle; a broad transverse fascia from middle of costa to beyond middle of inner margin, becoming lilacine on lower fourth and enclosing a large spot of ground color beneath costa; inner margin broadly light fuscous; hindwings with a broad yellowish trans-

verse fascia, broadly in middle, from costa just before apex direct to vein 1b; a bluish metallic patch on inner margin above anal angle; a greenish-golden hind-marginal line, rather narrow, with a slight projection on vein 2 and terminating before anal angle; cilia as above.

A beautiful insect when fresh, especially the under side; it differs from all the other known Australian species by the different color of band of under side of hindwings.

Brisbane, Mackay, and Cooktown, Queensland; Richmond River district, New South Wales; in December.

76. HASORA LUGUBRIS, Boisd.

(*Thymele lugubris*, Bdv., Voy. Astr. Lep., p. 160, No. 5, 1832.)

Male, 52 mm. Head, thorax, palpi, antennæ, legs, and abdomen fuscous, palpi, thorax, and abdomen yellowish beneath. Forewings elongate, triangular, costa gently arched, termen hardly bowed, nearly straight, oblique; ochreous-fuscous; an irregularly suffused, outwardly oblique blackish stigma, from just beyond one-third of inner margin to base of cell 3; cilia ochreous-fuscous. Hindwings with termen produced on vein 1; color and cilia as in forewings; basal and inner marginal hairs ochreous-fuscous. Under side of both wings ochreous-fuscous, more or less suffused with metallic-purple, especially hindwings; base below cell and along inner margin ochreous-fuscous; faint indications of a sub-median transverse whitish-purple fascia.

The absence of markings and purple coloring of under side of wings are notable characteristics.

Cape York, Queensland; one specimen, in December.

77. HASORA HURAMA, Butler.

(*Hesperilla hurama*, Butler, T.E. Soc., p. 498, 1870; Lepid. Ex., p. 166, t. 59, fig. 10, 1874; *Ismene hurama*, Misk., Ann., Queensland Mus., p. 74, 1891.)

Male and female, 48-54 mm. Head, palpi, antennæ, thorax, legs, and abdomen dark fuscous, head and thorax mixed with greenish-metallic hairs, palpi beneath ochreous. Forewings elongate, moderate, costa gently arched, termen slightly rounded near apex, thence oblique; dark purplish fuscous; basal hairs greenish-golden; without markings; stigma of male formed by blackish seam-like scales, from before middle of inner margin to base of vein 3; cilia dark fuscous. Hindwings with termen produced on vein 1, color, basal hairs and cilia as in

forewings; inner margin clothed with long fuscous hairs. Under side of forewings fuscous, purplish tinged between termination of cell and termen, more pronounced in female; cilia as above. Under side of hindwings fuscous, wholly suffused with iridescent purple; a broad transverse white entire fascia, broadest in middle, posterior edge straight, anterior edge somewhat projecting in middle, from three-fourths of costa direct to vein 1b, thence deflected to inner margin above anal angle; a suffused blackish blotch on anal angle; cilia as above, but becoming whitish at base between veins 1 and 2.

Distinct by the broad entire fascia of under side of hindwings.

Watson (P.Z.S., 1893) spells this *Hurana*.

Cooktown, Cardwell, and Mackay, Queensland; five specimens, November to February.

78. HASORA CHROMUS, Cramer.

(*Papilio chromus*, Cramer, Pap. Ex., iii., pl. cclxxxiv., fig. E., male, 1782; *Parata chromus*, Moore, Lep. Cey., i., p. 161, pl. lxxv., figs. 1, a, b, 1881.)

Male and female, 40-48 mm. Head, palpi, antennæ, thorax, legs, and abdomen dark fuscous, palpi beneath faintly ochreous, collar greenish. Forewings elongate, triangular, costa gently arched, termen faintly rounded, oblique; dark fuscous, without markings; basal hairs fuscous; stigma of male formed as interneural streaks; cilia dark fuscous. Hindwings with termen produced on vein 1b; color, basal hairs, and cilia as in forewings. Under side of forewings dark fuscous; cilia as above. Under side of hindwings as forewings; a narrow, white, transverse fascia, posteriorly dilated, from costa at three-fourths direct to vein 1b, and there dilated; a small whitish patch on inner margin near termination of vein 1a; a large blackish patch on anal angle; cilia fuscous, becoming white at base between veins 1 and 2.

Varies somewhat in size and width of white band of under side of hindwings. Those which we possess from India and Ceylon show a tendency to be suffused with purplish on under side of hindwings. The species named *Lucescens* by Dr. Lucas has been confused with the present species. However, the totally different form of the stigma, which in the former is well developed and of raised crescentic form, is very different to that of *Chromus*, in which it appears (in Australian specimens) as short longitudinal raised interneural streaks. The broad band of hindwings of former is also a conspicuous character. Messrs. Elwes and Edwards give *Alexis*, Moore, and *Malayana*, Feld. as, synonyms.

Brisbane and Mackay, Queensland, in December; occurs also in India and Java.

79. *HASORA DOLESCHALLII*, Feld.

(*Ismene doleschallii*, Feld., Sitzb. Ak. Wiss. Wien. Math. Nat. Cl., xl., p. 460, 1860; Reise. Nov. Lep., iii., t. 72, fig. 16, 1867.)

Female 50 mm. Head and palpi greenish-golden. Thorax, antennæ, legs and abdomen dark fuscous, thorax and anterior half of abdomen clothed with golden-greenish hairs, thorax beneath bluish-green. Forewings elongate, triangular, costa gently arched, termen gently rounded, oblique; dark fuscous; basal fourth of wing clothed with golden-green hairs, cilia dark fuscous. Hindwings with termen prominent on vein 1, not produced; dark fuscous; basal and inner marginal hairs golden-green, becoming bluish posteriorly; cilia as in forewings. Forewings beneath fuscous; markings whitish; a small spot in middle of cell; a second similar near base of veins 3 and 4; a short transverse lilacine streak from vein 1 beyond middle to near vein 3, its apex directly between first 2 spots, but not quite reaching them. Hindwings blackish-fuscous; a small bluish-white spot in cell near base; a moderate bluish-white spot two-thirds from base, between veins 1 and 2; cilia dark fuscous, becoming snow-white at base from anal angle to vein 3, but interrupted at extremities of veins.

A very beautiful species; remarkable for the paucity of markings on both upper and under sides of wings.

Cooktown, Queensland; two specimens in December. Occurs also in New Guinea and Molucca.

LIST OF UNRECOGNISED AND REPUTED AUSTRALIAN SPECIES.

80. *amalia*, Semp. (*Pamphila*) (Mus. Godf. Lep, XIV., p. 183, 1878). Rockhampton.
81. **ancilla*, Herr-Sch. (*Pamphila*) (Stett. Ent. Zeit., p. 79, n. 59, 1869). Rockhampton.
82. *argens*, Plotz. (*Hesperilla*) (Stett. Ent. Zeit., XLIV., p. 227, 1883). Cape York.
83. *argina*, Plotz. (*Pyrgus*) (*l.c.*, XLV., n. 22, 1884). Brisbane.
84. *atraz*, Mab. (*Hesperilla*) (Comp. Rend. Ent. Belg., XXXV., p. lxxxii.). Australia.
85. *augiades*, Feld. (*Pamphila*) (Sitzb. Ak. Wien M. N., cl. XV., p. 461, n. 51, 1860. Reis. Nov. Lep. III. t. 72, f. 5, 1867). Probably recorded in error for *sperthias*, Feld.
86. *australensis*, Mab. (*Tagiades*) (Comp. Rend. Ent. Belg., XXXV., p. lxxii.). Australia.

* This is probably *Telicota augias*, Linn.

87. *bifasciata*, Tepp. (*Hesperilla*) (Tr. Roy. Soc., S.A., IV., p. 32, t. 2, f. 4, 1881). Lyndoch, S. Australia.

"Clear brown, with four oval yellow spots near the margin (termen), three similar near base, and a semilunar one between them and edge (costa). A double band—the outer *white*, the inner yellow—margins the posterior wings, and a small round yellow spot near base."

Mr. Tepper has supplied us with an excellent colored drawing of this species. The band of hindwings is a characteristic feature. The type, unfortunately, has been lost.

87A. *colaca*, Moore (*Pornara*) (P.Z.S., 1877, p. 594, pl. lviii., fig. 7).

M, Rowland Turner, of Mackay, has informed us that he has taken this species in the above district. Specimens were submitted to M. DeNiceville, who stated that they were exactly the same as Indian specimens.

88. *contempta*, Plotz. (*Ismene*) (Stett. Ent. Zeit., XLV., p. 56, 1884). Cape York.

89. *dolon*, Plotz. (*Apaustus*) (*l.c.*, XLIV., p. 166, 1884). Australia.

90. *eaclis*, Mab. (*Hesperilla*) (C.R. Ent. Belg., p. 63, 1883). Australia.

91. *extranea*, Plotz. (*Telesto*) (Stett. Ent. Zeit., p. 383, 1884). Australia.

92. *impar*, Mab. (*Pamphila*) (C.R. Ent. Belg., p. 46, 1883). Australia.

93. *indusiata*, Mab. (*Hypoleucis*) (*l.c.*, XXXV., p. cxiii.). Victoria.

94. *lagon*, Mab. (*Pamphila*) (*l.c.*, p. lxxxii.). Cooktown.

95. *leucopogon*, Mab. (*Proterodes*) (*l.c.*, p. cxi.). Victoria.

96. *melissa*, Mab. (*Hesperilla*) (*l.c.*, p. lxxxii.). Australia.

97. *neocles*, Mab. (*Pamphila*) (*l.c.*, p. clxviii.). Cooktown.

98. *nox*, Mab. (*Pamphila*) (*l.c.*, p. clxviii.). Victoria.

99. *phineus*, Cr. (? *Eryrnis*) (Pap. Ex., II., t. 176, E. 1779).
Recorded probably in error.

100. *rectivitta*, Mab. (*Pamphila*) (Pet. Nouv. Ent., II., p. 237, 1878). Australia (?).

101. *Rietmanni*, Semp. (*Hesperilla*) (Mus. Godf. Lep., XIV., p. 187, 1878). Sydney.

102. *satulla*, Mab. (*Hesperilla*) (C.R. Ent. Belg., XXXV., p. lxxxii.). Australia.

103. *saxula*, Mab. (*Hesperilla*) (*l.c.*, p. lxxxii.). Australia.

104. *sigida*, Mab. (*Pamphila*) (*l.c.*, p. clxviii.). Australia.

105. *tyrrhus*, Mab. (*Toxidia*) (*l.c.*, p. lxxx.). Cooktown.

106. *vallio*, Mab. (*Carystus*) (C.R. Ent. Belg., LX., p. 27, 1883).
New Holland.

INDEX.

GENERA.

Genera asterisked are confined to the Australian region. Names of species in italics are synonyms. The numbers refer to those attached in ordinal succession.

| | | | | | | | |
|-----------------------------------|---|---|----|-------------------------------------|---|---|----|
| Apaustus, <i>Hüb</i> | - | - | 9 | * <i>Netrocoryne</i> , <i>Feld.</i> | - | - | 3 |
| Badamia, <i>Moore</i> | - | - | 13 | <i>Notocrypta</i> , <i>Nic</i> | - | - | 12 |
| Casyapa, <i>Kirby</i> | - | - | 1 | * <i>Phœnicops</i> , <i>Watson</i> | - | - | 2 |
| Erynnis, <i>Schranck</i> | - | - | 11 | <i>Tagiades</i> , <i>Hüb</i> | - | - | 4 |
| * <i>Exometoeca</i> , <i>Meyr</i> | - | - | 8 | * <i>Telesto</i> , <i>Bdv.</i> | - | - | 6 |
| Hasora, <i>Moore</i> | - | - | 14 | <i>Telicota</i> , <i>Moore</i> | - | - | 10 |
| * <i>Mesodina</i> , <i>M.yr</i> | - | - | 5 | * <i>Trapezites</i> , <i>Hüb</i> | - | - | 7 |

SPECIES.

| | | | | | | | |
|---------------------------------------|---|---|-----|--------------------------------------|---|---|-----|
| <i>aeluropis</i> , <i>Meyr.</i> | - | - | 7 | <i>critomedia</i> , <i>Guer.</i> | - | - | 1 |
| <i>agna</i> , <i>Moore</i> | - | - | 69 | <i>croceus</i> , <i>Misk</i> | - | - | 36 |
| <i>agraulia</i> , <i>Hew.</i> | - | - | 56 | <i>croites</i> , <i>Hew.</i> | - | - | 43 |
| <i>albifascia</i> , <i>Misk</i> | - | - | 70 | <i>crypsargyra</i> , <i>Meyr.</i> | - | - | 14 |
| <i>albifascia</i> , <i>Moore</i> | - | - | 71 | <i>crypsigramma</i> , <i>n.sp.</i> | - | - | 38 |
| <i>alexis</i> , <i>Moore</i> | - | - | 78 | <i>cyclospila</i> , <i>n.sp.</i> | - | - | 20 |
| <i>alix</i> , <i>Plotz</i> | - | - | 53 | <i>cynone</i> , <i>Hew.</i> | - | - | 49 |
| <i>alysos</i> , <i>Moore</i> | - | - | 71 | <i>curvifascia</i> , <i>Feld.</i> | - | - | 71 |
| <i>amalia</i> , <i>Semp.</i> | - | - | 80 | <i>dactyliota</i> , <i>Meyr.</i> | - | - | 28 |
| <i>ancilla</i> , <i>Herr-Sch.</i> | - | - | 81 | <i>denitza</i> , <i>Hew.</i> | - | - | 3 |
| <i>Andersoni</i> , <i>Kirby</i> | - | - | 23 | <i>dirphia</i> , <i>Hew.</i> | - | - | 16 |
| <i>angustula</i> , <i>Herr-Sch.</i> | - | - | 61 | <i>discolor</i> , <i>Feld.</i> | - | - | 75 |
| <i>argenteo-ornatus</i> , <i>Hew.</i> | - | - | 46 | <i>dispar</i> , <i>Kirby</i> | - | - | 24 |
| <i>argeus</i> , <i>Plotz.</i> | - | - | 82 | <i>doctea</i> , <i>Hew.</i> | - | - | 33 |
| <i>argina</i> , <i>Plotz.</i> | - | - | 83 | <i>Doleschalii</i> , <i>Feld.</i> | - | - | 79 |
| <i>arsenia</i> , <i>Plotz.</i> | - | - | 33 | <i>dolon</i> , <i>Plotz.</i> | - | - | 89 |
| <i>atralba</i> , <i>Tepp.</i> | - | - | 28 | <i>dominula</i> , <i>Plotz.</i> | - | - | 17 |
| <i>atrax</i> , <i>Mab.</i> | - | - | 84 | <i>donnysa</i> , <i>Hew.</i> | - | - | 21 |
| <i>atromacula</i> , <i>Misk</i> | - | - | 26 | <i>Doubledayi</i> , <i>Feld.</i> | - | - | 29 |
| <i>augiades</i> , <i>Feld.</i> | - | - | 85 | <i>drachmophora</i> , <i>Meyr.</i> | - | - | 18 |
| <i>augias</i> , <i>Linn.</i> | - | - | 59 | <i>eaclis</i> , <i>Mab.</i> | - | - | 90 |
| <i>australensis</i> , <i>Mab.</i> | - | - | 86 | <i>eclipsis</i> , <i>Butler</i> | - | - | 26 |
| <i>autoleon</i> , <i>Misk</i> | - | - | 63 | <i>eliena</i> , <i>Hew.</i> | - | - | 42 |
| <i>bambusæ</i> , <i>Moore</i> | - | - | 60 | <i>exclamationis</i> , <i>Fab.</i> | - | - | 72 |
| <i>bathrophora</i> , <i>n.sp.</i> | - | - | 39 | <i>extranea</i> , <i>Plotz.</i> | - | - | 91 |
| <i>beata</i> , <i>Hew.</i> | - | - | 2 | <i>Feisthamelii</i> , <i>Bdv.</i> | - | - | 71 |
| <i>bifasciata</i> , <i>Tepp.</i> | - | - | 87 | <i>flammeata</i> , <i>Bull.</i> | - | - | 26 |
| <i>bilunata</i> , <i>Bull.</i> | - | - | 73 | <i>flavovittata</i> , <i>Latr.</i> | - | - | 54 |
| <i>caristus</i> , <i>Hew.</i> | - | - | 1 | <i>forulus</i> , <i>Hüb</i> | - | - | 72 |
| <i>cæsina</i> , <i>Hew.</i> | - | - | 70 | <i>fulgida</i> , <i>Misk.</i> | - | - | 68 |
| <i>celæno</i> , <i>Cox</i> | - | - | 53 | <i>fuliginosa</i> , <i>Misk.</i> | - | - | 67 |
| <i>chaostola</i> , <i>Meyr.</i> | - | - | 22 | <i>fumosa</i> , <i>Guest.</i> | - | - | 53 |
| <i>chaya</i> , <i>Moore</i> | - | - | 69 | <i>gamelia</i> , <i>Misk.</i> | - | - | 6 |
| <i>chromus</i> , <i>Cr.</i> | - | - | 78 | <i>gracilis</i> , <i>Tepp.</i> | - | - | 49 |
| <i>chrysotricha</i> , <i>n.sp.</i> | - | - | 15 | <i>halyzia</i> , <i>Hew.</i> | - | - | 8 |
| <i>chryszona</i> , <i>Semp.</i> | - | - | 62 | <i>haslia</i> , <i>Swinh.</i> | - | - | 73 |
| <i>clavata</i> , <i>Staud.</i> | - | - | 71 | <i>heteromacu'la</i> , <i>n. sp.</i> | - | - | 40 |
| <i>colaca</i> , <i>Moore</i> | - | - | 87A | <i>humilis</i> , <i>Misk.</i> | - | - | 31 |
| <i>comma</i> , <i>Kirby</i> | - | - | 51 | <i>hurama</i> , <i>Bull.</i> | - | - | 77 |
| <i>compacta</i> , <i>Bull.</i> | - | - | 34 | <i>iachus</i> , <i>Fabr.</i> | - | - | 42A |
| <i>contempta</i> , <i>Plotz.</i> | - | - | 88 | <i>idothea</i> , <i>Misk.</i> | - | - | 25 |

| | | | | | | | |
|------------------------------|---|---|----|------------------------------|---|---|-----|
| <i>impar, Mab.</i> | - | - | 92 | <i>parvulus, Plotz.</i> | - | - | 31 |
| <i>indusiata, Mab.</i> | - | - | 93 | <i>perornata, Kirby</i> | - | - | 9 |
| <i>ismene, Newm.</i> | - | - | 31 | <i>Perronii, Latr.</i> | - | - | 33 |
| <i>ismenoides, Mab.</i> | - | - | 66 | <i>petalia, Hew.</i> | - | - | 41 |
| <i>janetta, Bull.</i> | - | - | 6 | <i>phigalia, Hew.</i> | - | - | 50 |
| <i>Julianus, Latr.</i> | - | - | 69 | <i>phillyra, Misk</i> | - | - | 50 |
| <i>Kochii, Feld.</i> | - | - | 33 | <i>phineus, Cr.</i> | - | - | 99 |
| <i>Kreflii, Macleay</i> | - | - | 59 | <i>phlæa, Plotz.</i> | - | - | 50 |
| <i>ladon, Cr.</i> | - | - | 72 | <i>picta, Leach</i> | - | - | 13 |
| <i>lagon, Mab.</i> | - | - | 94 | <i>poiphyropis, n.sp.</i> | - | - | 4 |
| <i>lascivia, Rosen</i> | - | - | 55 | <i>praxedes, Plotz.</i> | - | - | 42 |
| <i>Leachii, Feld.</i> | - | - | 29 | <i>pyrhias, Mab.</i> | - | - | 60 |
| <i>leucopogon, Mab.</i> | - | - | 95 | <i>qudrimaculata, Tepp.</i> | - | - | 16 |
| <i>leucostigma, n.sp.</i> | - | - | 30 | <i>rectivitta, Mab.</i> | - | - | 100 |
| <i>lucescens, Lucas</i> | - | - | 74 | <i>repanda, Feld.</i> | - | - | 5 |
| <i>lugubris, Bdv.</i> | - | - | 76 | <i>restricta, Moore</i> | - | - | 71 |
| <i>lutea, Tepp.</i> | - | - | 45 | <i>Rietmanni, Semp.</i> | - | - | 101 |
| <i>Macleayi, Plotz.</i> | - | - | 63 | <i>satulla, Mab.</i> | - | - | 102 |
| <i>maheta, Hew.</i> | - | - | 44 | <i>saxula, Mab.</i> | - | - | 103 |
| <i>Malayana, Feld.</i> | - | - | 78 | <i>scepticalis, Rosen</i> | - | - | 34 |
| <i>marnas, Feld.</i> | - | - | 57 | <i>senta, Misk</i> | - | - | 35 |
| <i>Mastersi, Waterh.</i> | - | - | 11 | <i>sexguttata, Herr-Sch.</i> | - | - | 32 |
| <i>mathias, Fab.</i> | - | - | 69 | <i>sigida, Mab</i> | - | - | 104 |
| <i>megalopsis, Meyr.</i> | - | - | 41 | <i>spertthias, Feld.</i> | - | - | 64 |
| <i>melissa, Mab.</i> | - | - | 96 | <i>sphenosema, n.sp.</i> | - | - | 47 |
| <i>mencia, Moore</i> | - | - | 69 | <i>sunias, Feld.</i> | - | - | 56 |
| <i>minimus, Misk.</i> | - | - | 53 | <i>symmumus, Hüb.</i> | - | - | 42 |
| <i>monticolæ, Oll.</i> | - | - | 19 | <i>Tasmanicus, Misk</i> | - | - | 51 |
| <i>munionga, Oll.</i> | - | - | 12 | <i>thrax, Led.</i> | - | - | 69 |
| <i>neocles, Mab.</i> | - | - | 97 | <i>thymbron, Feld.</i> | - | - | 72 |
| <i>nox, Mab.</i> | - | - | 98 | <i>trimaculata, Tepp.</i> | - | - | 16 |
| <i>nycteris, Meyr.</i> | - | - | 52 | <i>tymbophora, n.sp.</i> | - | - | 27 |
| <i>odix, Bdv.</i> | - | - | 1 | <i>tyrrhus, Mab.</i> | - | - | 105 |
| <i>ohara, Plotz.</i> | - | - | 58 | <i>ulama, Bull.</i> | - | - | 66 |
| <i>olivescens, Herr-Sch.</i> | - | - | 65 | <i>vallio, Mab.</i> | - | - | 106 |
| <i>ornata, Leach</i> | - | - | 10 | <i>volux, Mab.</i> | - | - | 71 |
| <i>palmarum, Moore</i> | - | - | 62 | <i>vulpecula, Prittw.</i> | - | - | 5 |
| <i>papyria, Bdv.</i> | - | - | 53 | <i>Walkeri, Heron</i> | - | - | 56 |
| <i>paraphaës, n.sp.</i> | - | - | 48 | <i>xanthomera, n.sp.</i> | - | - | 37 |